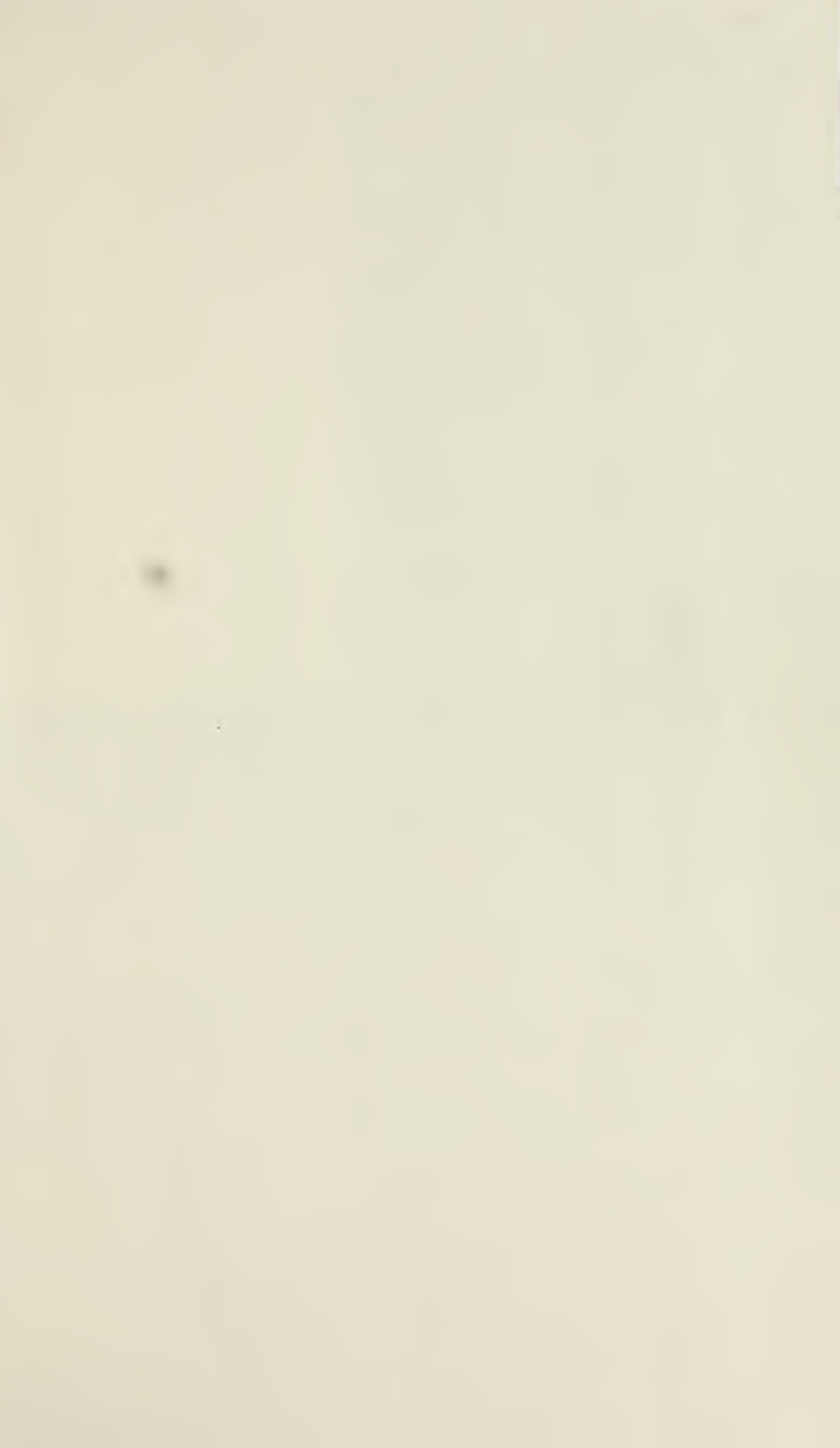


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HISTORY
OF THE
BERWICKSHIRE
NATURALISTS' CLUB

INSTITUTED SEPTEMBER 22, 1831

"MARE ET TELLUS, ET, QUOD TEGIT OMNIA, CÆLUM"

VOL. 45.
PART 1, 1990

**OFFICE BEARERS
1989-90**

President.

Mrs M.C.H. McCREATH, R.G.N.,
The Hollies, West End, Horncliffe TD15 1TE.
(Tel. (0289) 86327)

Joint Field Secretaries.

D. MACKENZIE ROBERTSON, Esq., 4 Hermitage Lane, Kelso.
Mrs D. MACKENZIE ROBERTSON, M.C.S.P., F.S.A.Scot.
(Tel. (0573) 324252).

Corresponding Secretary.

D.C. SOUTER, Esq., V.R.D., F.I.C.S., Detchant Park, Belford NE70 7PQ.
(Tel. (06683) 353).

Treasurer.

M.C. TROUSDELL, Esq., Hillburn House, Ayton TD14 5SG.
(Tel. (08907) 81325).

Editing Secretary.

Professor W.H.R. LUMSDEN, D.Sc., M.D., F.R.S.E.
16A Merchiston Crescent, Edinburgh EH10 5AX.
(Tel. (031) 229 2702).

Librarian.

Miss JEAN TRIMMER, M.A., North Cedars, Foulden TD15 1UH.
(Tel. (0289) 86571). (To February, 1990).
Dr G.A.C. BINNIE, Ladykirk, Norham, Berwick upon Tweed TD15 1XL
(Tel. (0289) 382201). (From March, 1990).

HISTORY OF THE
BERWICKSHIRE NATURALISTS' CLUB

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HISTORY OF THE BERWICKSHIRE NATURALISTS' CLUB

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TWO ASPECTS OF THE BERWICKSHIRE NATURALISTS' CLUB IN THE NINETEENTH CENTURY

*being the Anniversary Address delivered by Mrs M.C.H. McCreath,
President of the Club, on 26th October, 1990.*

INTRODUCTION

LADIES and Gentlemen, "So many topics of local and general interest have been exhausted by my able Predecessors in this chair, and in the various contributions which grace our annals, that in confining myself to a recapitulation of our proceedings during the past year...I shall best consult with the dignity of the Club and my own feeling of inability to fulfil the task assigned to me as your President". So began the Anniversary Address of the Rev. William Darnell M.A., in September 1858¹ – a mere 27 years after the formation of the Club. I know exactly how the Reverend gentleman felt, but I also know that our Editing Secretary would not let me off so lightly 132 years on.

Since becoming President last October I have revelled in having a complete set of the *History of the Berwickshire Naturalists' Club* at my disposal. The *History* tells the story of the finding and cataloguing of the flora and fauna of the Borders and the Proceedings of the Club from 1831 to the present. However, it is also a valuable source of information on the lives and times of its authors and I have used material from it in an attempt to relate two aspects of the early Berwickshire Naturalists' Club to the 19th century culture in which the Club developed.

Browsing through the early volumes, the reader immediately

becomes aware, that the writers felt a close relationship between nature and God; that the study of the natural world held for them something of a religious quest. It is also apparent that women played little or no part in the Club until 1872. These two characteristics suggest that the greater society, or at least its middle ranks from which membership was drawn, held the Bible to be literal truth; and also that women played little part in that society.

RELIGION AND SCIENCE

The first intimation of doubt about the relationship between nature and God occurs in Dr Clarke's address of 1838, in which he suggests that while members must have viewed recent scientific progress with pleasure they must also have been dismayed by a tendency, in certain parts of society, to consider that the discovery of facts and laws in nature weakened the authority of Scripture. However, Dr Clarke went on to state firmly that "the dread of finding the Book of Nature at variance with the Book of Revelation is vain and groundless".²

The publication of Darwin's *Origin of Species* in 1859, followed by *The Descent of Man* in 1871, suggest that, far from being groundless, the fears expressed in 1838 foreshadowed the earth-shattering effect of Darwin's theory of evolution on a society with a widely-held belief in the literal truth of the Bible. If Darwinism was accepted "variance in the books of nature and Revelation" had to be accepted also.

Not until 1884, when Commander Norman made it the subject for his Presidential address, was Darwinism discussed in any detail in the *History*. The lapse of time between publication of *The Origin of Species* in 1859 and the discussion in 1884 seems to indicate an extreme reluctance to come to grips with such revolutionary ideas on the part of the membership. Commander Norman finds it impossible to believe that "Man's ancestor was an ape" and ends his address resoundingly thus: "I confidently anticipate the speedy advent of the day when those who now, so to speak, range about in the semi-ape-like nudity of differentiated Man will be found 'sitting at the feet of Moses clothed, and in their right mind' "³

Mr John Bishop in his report to *The Berwickshire Naturalists' Club* of a meeting of *The British Association for the Advancement of Science* held in Leeds in 1927 finally drew the curtain on the long-standing controversy by quoting the President Sir Arthur Keith's words that: "today, among competent men of science, there is an unanimous agreement that Man has been evolved from an ape-like stock."⁴

THE ROLE OF WOMEN IN THE CLUB

I would now like to turn to the role of women in the 19th century culture, and particularly in the Club.

The Berwickshire Naturalists' Club was born into a rapidly changing society. By 1800 there was escalation of an already rapid population growth; and by 1851 half the population of England and Wales lived in urban areas.

From the 1750s the growth of industrial capitalism, enclosure, and rationalisation of farming, caused accumulation of wealth and altered the old order of society. A three-tier class system emerged with a new middle-class. More consumer goods became available and shops expanded in the towns, displaying their wares in new large windows. In Berwick, Paxton & Purvis was established in 1802 and Cowes the grocers in 1801.

Middle-class men in the 1830s abandoned hair-powder, lace, buckles and bright colours and wore dark, straight suits and top-hats.

Communications by road and canal improved and from the 1830s to the 1850s the railways opened up the countryside. Dr George Johnston, the Club's founder, wrote of the newly-opened line between Berwick and Edinburgh in the 1840s: "it is a safe enough line to one who has his life ensured or who has no family".⁵

There was a tendency among the new middle-classes to separate the work place from the home, which caused a suburban expansion of towns and cities. In Berwick, the land known as *Inner Cow Close* was leased in 1836 from The Treasury and appears as *Castle Terrace* first in the census of 1861.⁶

This separation also removed wives and daughters from participation in the middle-class family economy. This did not happen in the farming world where the dairy and the hen-run were still the farmer's wife's domain or in doctors' households, where waiting-room, consulting-room and dispensary would still be part of the home. Servants, very much part of the family in earlier years, were, around this time, moved below stairs.

Widespread working-class poverty, bad housing, sanitation and water supplies bred disease. In 1832 in his first Anniversary Address to the Club Dr Johnston mentions the presence of cholera in the area during the past year which he calls, "that fatal disease which has walked over the length and breadth of the land with fear at its front and mourning in its rear".⁷

Around this time nature and culture came to be seen as rigidly opposed; and the distinction was applied to men and women. Men were associated with culture and women with

nature. These ideas resulted in a stereotyped view of gender arising from biology. Women were seen as passive while men were active. Woman's sphere was considered to be the private one of the home where she presided as guardian angel of the physical and moral well-being of her household, kept far removed from the public world of men and affairs.

This essentialist view of womanhood governed the kind of education thought suitable for middle-class girls. Too much brain-work was believed to be bad for women's reproductive capacity and girls were reared for marriage and motherhood. They learned to be ladies, to paint a little, play the piano or embroider. Perhaps they would accompany their mothers on charitable visits to the poor, a permitted extension of the sphere of the guardian angel of the household.

Married women in England before *The Married Woman's Property Act* of 1882 could not own anything separately from their husbands. Whatever a woman earned, immediately became her husband's property. Single women or those with dependants found great difficulty in supporting themselves in a respectable manner. This was the era of the governess, as portrayed by the Brontë sisters.

Florence Nightingale wrote in *Cassandra*, her passionate tirade against "women's lot": "This system dooms some minds to incurable infancy, others to silent misery". It is interesting to note that *Cassandra* was written in 1852 before the Crimean War, which freed Miss Nightingale to begin her life's work. It was privately printed in 1858 and shown to a few friends, among them John Stuart Mill, the philosopher and politician. It was, however, not published until 1928.

From the 1780s onwards new organisations and clubs were being formed throughout the country by and for men. The Royal Agricultural Society and the Freemasons were formed at this time; also the British Association which is one week younger than our own Club. In 1823 the Plinian Society, a field club, was formed in Edinburgh by students, among them the Baird brothers, sons of the Rev. James Baird, Minister successively of Legerwood, Eccles and Swinton.

The Plinian Society did not survive, but Andrew Baird, its first president, became Minister of Cockburnspath in 1831 while his brother John was Minister in Yetholm. Shared interests brought the brothers into contact with Dr Johnston and their experience in the Plinian Society was central to the formation of The Berwickshire Naturalists' Club at Tommy Grant's, now, Grantshouse, in September 1831.

In 1831 the membership of the Club consisted of two

ministers and seven doctors. It is surprising, in view of the beliefs and attitudes of the day that women participated in any way; but we find that four ladies were made extraordinary members. Miss Bell, Miss Elizabeth Bell and Miss Hunter were all active botanists while Mrs Dr Johnston as she is always called in the *History* was the accomplished illustrator of her husband's botanical and zoological works. The lady botanists were all unmarried and therefore their interest did not interfere with the domestic role of wife and mother. Mrs Dr Johnston was fortunate to possess a talent which could be used to contribute to her husband's enterprise. None of these women ever attended a field-meeting nor can I find any evidence that women ever agitated for greater participation in the Club's activities.

All the lady botanists' names appear in the *History*, but most frequently that of Miss Elizabeth Bell who found a rare fungus growing on a dead reed at The Hirsell. Dr Johnston named the fungus after its finder – *Agaricus Belliae*.⁸

Mrs Dr Johnston died in 1871. William Boyd Esq., of Ormiston, says in her obituary: "her name will descend to posterity connected with a distinct and elegant species of Coralline, *Plumaria Catherina* dedicated to her by her husband."⁹ In another obituary (of Robert Hume, Solicitor) written in 1867, the widow received the following accolade – she "for nearly forty years, proved herself worthy of the love of such a man".¹⁰

In the 50s and 60s the extension of male suffrage from that achieved in 1832 became a key issue in the country. Increasingly the role of women regarding the ownership of property, the opportunity to receive a decent education and to work became topics of much discussion.

Specific successes in legislation, education and occupational development can be traced from the 1850s due to courageous efforts by such pioneers as Florence Nightingale in nursing, Emily Davies in education and the Northumbrian-born Josephine Butler in legislation. Women doctors, among them Elizabeth Blackwell, Elizabeth Garrett Anderson and Sophia Jex-Blake eventually won their battle for clinical training and recognition in the 1870s. Emily Blackwell¹¹, one of the pioneering doctors, was befriended in Edinburgh as early as 1854 by Sir James Young Simpson, the discoverer of the anaesthetic property of chloroform. Sir James, who was a member of this Club in the 1860s, employed Emily Blackwell as his assistant.

Attempts to obtain women's suffrage, the ultimate recognition of their equal status as citizens, were constantly frustrated.

John Stuart Mill's attempts to have female suffrage included in the 1867 Reform Bill failed as did later attempts in 1870, 1875, 1876, 1878 and 1884. However, in 1869 women became eligible to vote in municipal elections, in 1870 to vote for and serve on school boards, and in 1888 to serve on the newly-established County Councils.

It is hardly surprising that, in the midst of all this activity by women throughout the country, they were at last permitted to attend field meetings of The Berwickshire Naturalists' Club as honorary members in 1872. No dire consequence can have arisen from this cautious opening of the door to women because in 1901 they were finally admitted to the Club as full members.

NOTES

All the references are to the *History of the Berwickshire Naturalists' Club*.

1. Vol. 4, 57.
2. Vol. 1, 165.
3. Vol. 10, 425-436.
4. Vol. 26, 257-265.
5. Centenary Index (1933), 18.
6. Vol. 1, 2.
7. Vol. 1, 11.
8. Vol. 12, 2.
9. Vol. 6, 193.
10. Vol. 5, 340.
11. Sister of Elizabeth Blackwell.

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ST ANDREWS – BERWICKSHIRE – BERWICK

A skein of medieval links

Raymond Lamont-Brown, M.A., F.S.A.(Scot.)

3 Crawford House, 132 North Street, St Andrews, Fife.

KY16 9AF.

The 850th anniversary of the founding of the Burgh of St Andrews is a propitious time to assess the important medieval links between Berwickshire, the quondam Scottish town of Berwick upon Tweed, and Scotland's erstwhile ecclesiastical capital; for both Berwick town and Berwick county residents played a significant part in St Andrew's town and see history 1140-1559.

The spirit for the foundation of St Andrews arose from the regal regeneration of the Scottish kingdom in the twelfth century. Among the Scottish municipalities to be organised by 1120 were Berwick, Roxburgh, Edinburgh and Selkirk which David I made royal burghs within the *curia quatuor burgorum* – the Court of the Four Burghs.¹ Within 25 years of these foundations St Andrews was founded on the already established settlement site² on the triangle of land between the Kinness Burn and the beetling seacliffs girt by the *Oceanus Germanicus*.

The precursor settlements on the site had a long and involved history. Here, by the sixth century, was an important Pictish settlement with an influential monastery of the Celtic Church. The site had already been linked by at least the eighth century to the religious community known in record by its Gaelic name of *Ceannrighmonadh*.³ This area, "the head of the king's mount" is likely to have been established as a religious community by the seventh century, and by the 730s the cult of the Apostle and Martyr Andrew of Bethsaida in Galilee was introduced to the Celtic monastic centre of *Kinrimund*, its new name by the time of David I's rule 1124-53.

In the 840s the kingdom passed into Scottish control and the original religious focus passed from Iona, lost to the Vikings, to be centred on the monastery of Dunkeld which by 865 became the see of the "chief bishop of Fortriu", the latter name referring to the Scoto-Pictish kingdom which had by then developed. Around the year 900 the seat of this bishopric was removed to

Kinrimumd, probably to associate the ensuing Scottish kings with the Pictish cult of St Andrew. Thus when the great reorganisation of the kingdom took place in the twelfth century "the church of St Andrew of *Kinrimumd*" and its associate bishopric assumed precedence.

An important change in the status of St Andrews occurred during the episcopate of the last truly Gaelic bishop of the see, Fothad II, with the erection, around the 1070s, of a new reliquary chapel for whatever relics of the Apostle St Andrew existed. The chapel became known as "St Rule's Chapel" (linking it with the traditional tales recounting how the Greek monk Rule had brought the relics to *Kinrimumd*) and superseded the earlier Celtic church which had heretofore housed the relics. This was the state of the site when Bishop Robert, the former Prior of Scone, arrived at the location with Augustinian canons from the royal abbey of Scone to reform the ancient ecclesiastical centre at *Kinrimumd*.

Historians accept that the burgh of St Andrews was founded with the permission of David I sometime between 1140 and 1150 by Bishop Robert who died *circa* 1158-59, and whose seal (*sigillum*) described him as Roberti epi(scopi) Scotorum, 'bishop of the Scots'. The episcopal demesne of the bishops of St Andrews, of course, was well established by 1140 from the eastern borders with England at the Tweed to the Dee at Aberdeen, with an expanse towards Stirling in the west; probably the eastern borderland of Berwickshire had been added as a consequence of the expanding royal authority in the eleventh century. Scotland, of course, was a distinct "province" of western Christianity, and by 1192 was to be dubbed a "special daughter" of the papacy. St Andrews was exempt from metropolitan authority (i.e., of York who always claimed supreme authority) and functioned at the direct authority of Rome. By the thirteenth century too, Lothian had three deaneries within its archdeaconry, namely Merse (ecclesiastical Berwickshire and Berwick), Haddington and Linlithgow.

Thus Bishop Robert's see included Berwickshire and Berwick upon Tweed (until its inclusion in the see of Durham in 1310) within the archdeaconry of Lothian (around 1144) and links between the county and town which bore the latter's name were forged from the early days of St Andrews' existence. Indeed it is likely that Bishop Robert changed the name of *Kinrimumd* to St Andrews to celebrate his new foundation and to give a more identifiable focal point for his see to those who lived in the then far-flung Aberdeen and Berwick. It is interesting to note that the charter memorandum noting

Robert's foundation contains the first use of St Andrews as a place-name as *apud Sanctum Andream in Scotia*.⁴

In passing it may be noted that Bishop Robert appointed "local men" for his southernmost archdeaconry and deaneries. The first archdeacon of Lothian was the Northumbrian Dominus Thor de Lindisfarne,⁵ whose office was endowed with the Berwickshire lands of Simprim.⁶ Bishop Robert also appointed Aiulf (1150-86) the first rural dean within the Lothian archdeaconry. In time two rural deaneries (among others) were established for the diocese, one for Lothian, Tynningham and Liston, and the other for Berwickshire-Berwick at Fogo (*circa* 1150-62).

Bishop Robert set about establishing the Augustinian Priory at St Andrews in 1144 whose site was to include the adjacent great cathedral, the architectural jewel of medieval Scotland. Around the 1150s Bishop Robert sought for a civic head for his burgh at St Andrews from among Berwick-Berwickshire folk and chose as his first provost (*praepositus*) the king's opulent wool merchant (*proprius burgensis regis*) Maynard the Fleming.⁷

Why should the bishop choose Berwick as a location to headhunt his provost? A number of links present themselves. Berwick and its neighbouring Berwickshire Saxon *villa* of Bondington had been surrendered in 840 to Kenneth Mac-Alpine, and by and large, Berwick remained Scottish for two centuries and was a flourishing, influential, rôle-model Scottish burgh by the time Bishop Robert was establishing his new burgh. It is likely too, that Bishop Robert knew Berwick well, or at least some of its leading citizens, and certainly would be aware of the importance of the Flemings within the town. Until the Wars of Independence, the "social frontiers" between England and Scotland were nearer to the Humber than the Tweed,⁸ and there was much toing and froing on the king's business amongst the merchants from the east coast ports of Scotland with those of the southern end of the see and Northumberland. The reliquary chapel erected at St Andrews and dedicated to St Rule, more than proves a direct link with the Northumbrian school of architecture. Moreover, without going into the various legends of the "coming of St Andrew's bones" to St Andrews, it may be noted⁹ that one of the legend skeins mentions that it was Bishop Acca (the successor of St Wilfred, Archbishop of York 634-709, to the see of Hexham), who was driven from his see in 733, and who removed from the church and priory of St Andrew at Hexham certain "relics" of the Apostle. The inference is that the relics (probably *brandea* – pieces of garments, rather than corporeal relics) displayed at St

Andrews were Acca's and were acquired by High King Angus. Thus for these reasons it can be said that there were strong cultural links between the new bishop's burgh and the *curia* burgh of Berwick.

Regarding the choice of Maynard the Fleming as the first provost it may be said that the Flemings were well represented in the merchant cadres of the Borders (and within the early royal burghs) and many like Freskin de Moravia, landowner of Strathbrock (Uphall, West Lothian) had political influence and places at court. All that is known about Maynard is printed in the *Black Book of St Andrews* compiled by the town clerk John Mutto.¹⁰ Maynard was not wholly a freeman (cf. *proprius burgensis regis*) and at the bishop's request Maynard was moved to St Andrews by King David in *eleemosina*. The Fleming, however, was granted the title of "prefect" and a grant of three tofts of land in the new burgh of St Andrews.

Nothing further is known about Maynard the Fleming of Berwick but the bishop rapidly increased his household staff – of whom several made regular visits to Berwickshire to oversee the properties at Berwick and the episcopal barony at Stow. The bishop's chamberlain oversaw the episcopal demesne with the help of three seneschals for Lothian-Merse, Fife and North Tay. From the early charters of Bishop Robert and of David I¹¹ we can see something of the properties owned in Berwick by the see of St Andrews. The charter of Bishop Robert of 1144 mentions the endowment for the Augustinian Priory at St Andrews of a fishery (*unam aquam*) on the Tweed by Berwick, and a charter of David I confers more fishing rights to the priory and property in Berwick (*unam toftam juxta ecclesiam*) free from all taxes and tolls.

The next important documentary links between St Andrews and Berwickshire occur in the thirteenth century during the episcopate of David de Bernham. De Bernham was born *circa* 1199 at Berwick upon Tweed of a family of Berwickshire landowners probably during the period of "armed friendship" between William the Lion and John Lackland. In the *Chartulary of the Priory of St Andrews*, David de Bernham is described as *camerarius Scotiae* along with his brother *Robertus Bernham, Burgensis de Berwick*, whom historian William Lockhart¹² names as *maior* (Mayor) of the town in 1249, the year that Berwick's *Statutae gildae* (guild regulations) were drawn up.

David de Bernham may have been first educated in one of the Border monastic schools – possibly that of the Tiron Benedictines at the Abbey of Kelso only a few miles away from the de Bernham lands in southwest Berwickshire – and at Paris (or

Oxford). Professed sub-deacon by *circa* 1225 when he entered Bishop William de Malvoisine's St Andrews household, de Bernham became vicar of Haddington and graduated to the court of Alexander II; de Bernham became Alexander's *camerarius* (chamberlain).

On 1 October 1239 de Bernham succeeded Scotland's Lord Chancellor, the Anglo-Norman William Malvoisine, to the see of St Andrews having been appointed by the Avignon Pope Gregory IX. In the appointing Bull, de Bernham is described *virum utique genere nobilem, ornatum moribus et scientia, ac in spiritualibus et temporalibus circumspectum* ("a man truly of noble birth, distinguished in manners and learning and circumspect both in spiritual and temporal concerns"). Indeed de Bernham shows how Berwickshire families contributed members to the newly developing "native-born urban burghal class".

De Bernham's diocese contained in excess of 240 parishes with a number of private and parochial parishes with altogether an estimated 88,000 souls under his care¹³. One parish in Berwickshire was very old: Eccles baptismal church (dedicated to St Cuthbert), with chapels at Birgham, Leitholm and Mersington probably dated from the foundation of St Andrews itself. De Bernham is remembered most today for his dedication and consecration (or *reconciliatio*) of 140 churches in his diocese during the period 1240-49. The *Pontificale Ecclesiae S. Andreae*¹⁴ lists eighteen such dedications for Berwickshire, the first being Mertoun, *Eccl. de Mertun juxta drieburgh, circa* 16 August 1241 and the last, Coldstream, *Eccl. de Kaldestrem* on 6 October 1248; it also lists two for Berwick, namely St Nicholas (*Eccl. sci. Nicholai de Berwyck*, 8 July 1240) and Holy Trinity (*Eccl. sce. Trinitatis*, 15 April 1242 – reconsecrated after the shedding of blood by violence on its premises).

It seems that David de Bernham made many visitations within his diocese and the inference is that he spent much of his declining years in Berwickshire. Certainly his family pressed for his interment at Kelso (his *alma mater*?) rather than the choir aisle of St Andrews cathedral with his predecessors. There are two conflicting accounts of de Bernham's end. John Spottiswoode (1565-1639), Archbishop of St Andrews tells us¹⁵ that he was overcome by fever and died at York on 1 May 1251 when accompanying the Scottish nobility at the marriage of the 10-year-old Alexander III to Margaret, daughter of Henry III of England. On the other hand John of Fordun (*circa* 1320-84) states¹⁶ that he died at *Nanthanira* (Nenthorn) on 26 April 1253 to be buried *contra protestationem ecclesiae Sancti Andreae* at Kelso Abbey.

Among other documents¹⁷ we can see that during the sittings at Berwick in 1278, to settle the matter of boundaries between England and Scotland, William Wishart of St Andrews was present to represent his see (with no satisfactory outcome to the proceedings), yet the only other cleric offering a recorded direct link between Berwickshire and St Andrews was William de Lamberton, Chancellor of Glasgow, who succeeded to the see in 1297. The de Lambertons had originally settled within a coastal location in Berwickshire which bore their name, a handful of miles north of Berwick upon Tweed, and by the end of the twelfth century they had property at Linlathen, Angus, and Bourtie, Aberdeenshire. It is unclear to which branch of the family the bishop belonged. He seems to have been at Berwickshire fairly regularly in a medieval sense; one occasion being when John Comyn of Badenoch was murdered at Greyfriars, Dumfries, on 10 February 1306. De Lamberton was thwarted on entering Berwick in 1311 by the presence of the English garrison.¹⁸ He was present too as a diplomat at the drawing up of the Truce of Berwick in 1322, but died in the prior's chamber at St Andrews on 7 June 1328 to be buried in the completed cathedral he had consecrated in 1318.

During the period under consideration, Berwickshire had three nunneries (Coldstream, Eccles and St Bothans), seven hospitals (Aldcambus, Cockburnspath, Duns, Horndean, Hutton, Lauder and Legerwood), one priory (Coldingham) and one abbey (Dryburgh) which all owed allegiance to their bishop/archbishop superior at St Andrews, and the regular visits of the episcopal staff kept strong ties with the capital of the see. And, before 1310 when their allegiance was transferred to Durham, Berwick upon Tweed had the Dominican Friary of St Peter Martyr of Milan, the Franciscan Friary, the Carmelite Friary, the Friary of St Augustine, the house of the Friars of the Sack, the Cistercian nunnery of Halyston, the hospitals of Maison Dieu, St Edward, St Leonard, and St Mary Magdalene. There were also five medieval churches with the Bishop of St Andrews's patronage.¹⁹ A scouring of the medieval references brings some light on more links.

For instance diocesan clerks representing Richard, Bishop of St Andrews, visited the Cistercian nunnery of Coldstream (founded by Gospatrick, Earl of Dunbar, *circa* 1166) to deliver the episcopal confirmation charter.²⁰ And on 23 February 1537 the convent petitioned their "Most Reverend Father and Lord in Christ", James Beaton, Archbishop of St Andrews, to confirm Dame Janet Hoppringill as their prioress.²¹ This was confirmed *via* the archdeacon's office by Edward Dickson, notary public to the see.

It is interesting to note that both the English court and the senior clergy of the St Andrews diocese used Berwickshire religious houses for "spying missions".²² Indeed the aforementioned Prioress Janet Hoppringill is described by Thomas, Marquis of Dorset (who was the Early of Surrey's acting warden of the East Marches) in a despatch to Henry VIII as "one of the best and assured spies that we have in Scotland".²³

Another instance of the business of the see is seen on 6 April 1472 when Coldingham Priory (founded 1139 as a dependency of Durham and then Dunfermline) was annexed by Pope Sixtus IV to the Collegiate Church and Chapel Royal of St Mary of the Rock at St Andrews.²⁴ Coldingham, because of its rumbustious history and importance as a strategic base, features much in the records of the see mostly concerning squabbles as to who should be Prior.

On 13 August 1472, Cardinal Francisco della Rovere, by-named Pope Sixtus IV, formulated the see of St Andrews into an archbishopric, with its archbishops *metropolitans* (administrative heads) of the *province* embracing all of the bishoprics of the Scottish church. From time to time there were calls from the English and politico-ecclesiastical place-seekers like Cardinal Innocenzo Cibo (who was appointed to the see by his uncle Pope Leo X when the see was vacant following the death of Bishop Schevez in 1496/97) to reduce the see to a bishopric again with full subservience to York, but this was never done. So it remained until the Reformation when the last medieval Archbishop of St Andrews, John Hamilton, was driven from his metropolis in 1559 and the medieval structure collapsed.

Nevertheless, right up to the dawn of the Reformation, the archepiscopal see was a property holder in Berwickshire and Berwick. By way of example the chamberlain and granitar accounts of the archbishopric in the time of Cardinal David Beaton, known as the *Rentale*²⁵ have these notes:

Under the accounts of Chamberlain Henry Lummysdane for 1539 are recorded rents for a house in the "Quarellgait" at Berwick and rents for farms at Magdalenfield, and defaulted rents of "houses in Berwick occupied by the English". The "ferme of a house or tenement in the Querellgait" is further recorded by Chamberlain Alexander Kynnynmonth at Whitsunday 1543 (Berwick was known as South Berwick then and in Latin *Bervici Australis super Tuedam*). The same houses were still held in 1545 and like as not until 1559. Likewise the see was administering archepiscopal properties at Auldham, Auldhamstocks, Legerwood, Coldstream, Edrom, Chirnside and Duns *et al.* well into the sixteenth century. And after the

Reformation Berwickshire clergy in some numbers served the new church who had been "loyalis chylder" to "His Grace the Lord Archbishop of St Andrews".

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TWO CENTURIES OF ROPE MAKING:
BERWICK UPON TWEED, 1752-1956

J. W. Bainbridge,
10 Castle Terrace, Berwick upon Tweed TD15 1NP

In that building, long and low,
With its windows all a-row,
 Like the port-holes of a hulk,
Human spiders spin and spin,
Backward down their threads so thin,
 Dropping, each a hempen bulk.

At the end an open door,
Squares of sunshine on the floor,
 Light the long and dusky lane.

While the wheel goes round and round
With a drowsy, dreamy sound,
 And the spinners backward go.

I Introduction

The memory of the ropery is enshrined in Longfellow's poem, *The Rope-walk*, and by the time that it was written, in 1858, ropes had been made in Britain for more than four centuries. The demand for rope increased with the upward surge in trade and it was in the age of the sailing ship that rope works opened in most seaports. Even small ports had their rope walks or rope grounds and Berwick was no exception.

Hemp proved itself over the earlier centuries to be the best fibre available for rope making. The lengths of hemp used were normally not less than a metre long and could be three times this length. The spinner wrapped the bundle of fibre round his waist and pulled out the required number of fibres, twisted them between thumb and forefinger and attached them to the hook of the 'whirl', or hand-jack, that was driven by a wooden wheel that was being slowly turned by a second worker. Then, pulling out more fibres, the spinner walked backwards along the rope walk which, in the biggest roperies could be up to 400 metres long to enable the British standard length of rope of 120 fathoms, or 219 metres, to be made (Plates 1-3). The art of rope

making was to have the feed of fibre and motion of the wheel in harmony. The spinner was the key figure who was in control of production. On reaching the end of the rope walk the yarn was taken from the whirl and attached to a reel, on to which it was wound. As the spinner walked towards the reel he took care to see that the yarn did not untwist. After spinning, the yarns were stretched – or warped – by supporting them on posts at intervals along the rope walk and tugging on them (Plate 4). The yarn was then, when required, tarred by drawing it through a bath of hot tar and passing it between rollers. The final stage in rope making was twisting the yarns into a single strand.

To progress to rope making in Berwick upon Tweed is to recognise the increased variety of trade that had begun to be carried on from the mid-18th century. Ship building, begun in 1751, soon led to a ropery being established. The powerful freemen's guild in the town was petitioned by a non-freeman, Arthur Byram, ship's carpenter, who proposed to 'set a Ship upon the Stocks provided the Corporation would allow him to follow his said trade in Town...' The Guild agreed to the proposal in October 1751 and ordered Arthur Byram to be assigned, during the Guild's pleasure, a place for building, lengthening and repairing ships below the Eight Gun Battery on the town's Elizabethan fortifications. The Guild also allowed him to 'Import Coastwise Oak planks and Oak Timber, Blocks, Sails and Rigging, and Such other Materials for Carrying on his said Business as he Cannot be provided with in this Town at as Cheap and Easy Rates as in other ports in England...'¹

II 18th century

On the 28th February 1752 George Loch, a rope maker from Newcastle upon Tyne, obtained the lease on a piece of ground for five shillings a year for use as a rope walk. The ground was 'that which runs from the old Scotch Gate along by the Bell Tower, towards the Gate in the Back Greens that leads to the Maudlin Fields'² – the same piece of land that was still being used a century and a half later as a ropery. The Berwick Roperie Company was formed immediately to assist George Loch to carry on his work. The founder members of the company were Fenwick Stow, William Stow Lundie, William Temple, William Hall, Thomas Rutherford, John Procter, George Forster and George Loch. All except the Newcastle man were burgesses of Berwick and among their number were merchants and an attorney.³ The shares of the original holders were gradually sold at an average of £16 until they were, in 1794, in the possession

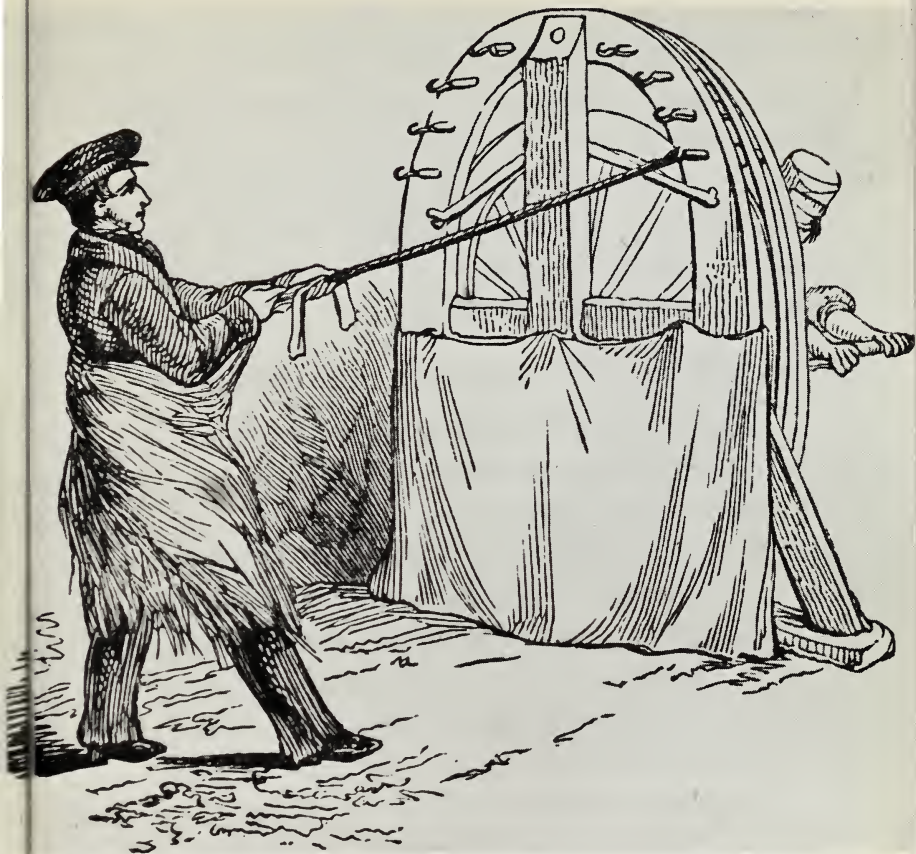


Plate 1. Rope-yarn making. From Dodd's *British Manufacturers*, 1846. A spinner, shown here with 40 pounds of hemp fibre round his waist, could make 1,000 feet of yarn in 12 minutes.



Plate 2. The rope-maker; from 'Trades described'.



Plate 3. The rope-maker.

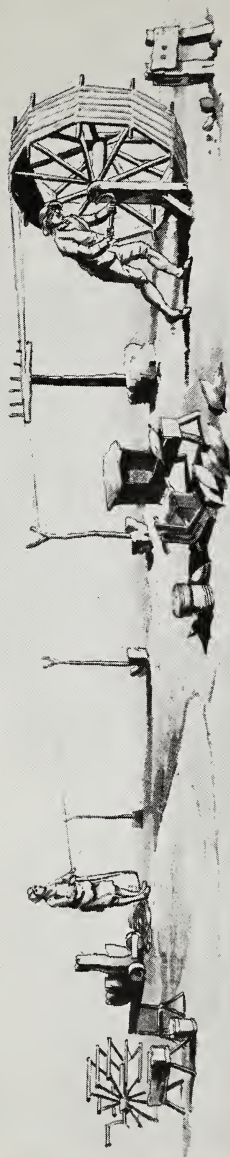


Plate 4. Rope-making in the early 19th century. A lithograph by W. Payne, of about 1802, indicates that the technique of rope-making changed but little over the years.

of Richard Todd, Ferrow Marshall and James Landels, of Berwick, coopers.⁴ In the same year John Robertson, another burgess-merchant,⁵ and John Miller Dickson, a non-freeman, joined the company and a lease of fifty-seven years was obtained in the name of the Berwick Ropery Company.⁶

Three other 18th century rope makers or companies, positively identified from documentary evidence, are listed in Table 1. The nature of their products illustrates how these small units, for the period under review, progressed from Arthur Byram's ship building needs to those of local farmers and fisheries. Another means of identifying rope makers or flax dressers of the period has been to extract from the *Guild Roll* the names of freemen thus occupied (Table 2). This displays how, in the final three decades of the century, two freemen had stemmed from having been apprenticed to Samuel Fenton (named in Tables 1 and 2), who, had himself qualified for the freedom by being the eldest son of Thomas Fenton, who had been the town's deputy gaoler when he himself had been admitted to the freedom.⁹

The only 18th century trade directory readily available in which Berwick upon Tweed featured is the *Universal British Directory* of 1792. Only two rope makers were listed in it: Andrew Jameson, grocer and flax dresser, and Stevens & Fenton, ropers.¹⁰

Table 1 Berwick's 18th century roperies⁷

Rope maker(s)	Ropery established	Detail	
George Loch & others:		Located	Berwick: top of Castlegate towards Bell Tower
Berwick Roperie Co.	1752	Manufactured Earnings	small ropes to cables journeymen: 12s weekly in 1799
Berwick Ropery Co.	1794	Relocated	Bowling Green Place in 1820
Samuel Fenton	1775	Located Manufactured Work force Earnings	Berwick ropes 6 men in 1799 from 12s to 14s weekly in 1799
Messrs. Dryden	1783	Located Manufactured Success	Tweedmouth ropes & sheep nets (for confining sheep on turnip fields) well established by 1799
Messrs. Berry, Gilly & Co.		Located Manufactured Work force	Berwick cord & small ropes (for the fisheries) 2 men + 3 apprentices in 1799

Table 2 18th century rope makers who were burgesses of Berwick⁸

Burgess	'Made free'	Trade	Place of residence
Samuel Fenton eldest son of Thomas	17 June 1768	Rope maker	Berwick
Robert Douglass apprentice to Samuel Fenton	17 January 1784		
George Allan apprentice to James Graham, merchant	19 January 1795	Flax dresser	
Thomas Strangeways	2 February 1795	Rope maker	London

**Table 3.1. 19th century rope and twine makers;
North of the River.¹¹**

Maker	Address	Directory listed	Minimum period in business
BOGUE George	High Street	1827	1827-64
	Greenses	1834	
	Marygate	1841	
	Sandgate	1847	
	48 High Street	1850	
	Quaywalls	1855	
	Sandgate & Wellclose Square	1858	
	High Street	1864	
CUNNINGHAM Mr	High Street	1806	1806
John	Ravensdowne	1841	1841
DAVIDSON Robert	Castlegate	1841 1847	1841-87
Matthew		1850	
Robert		1858 1864 1873	
R. & Son	5 Castlegate	1887	
John	113, 115 & 117 High Street & Wellclose Square	1897	1897
DICKSON John Miller	Quaywalls	1806	1806-47
	Quay	1820	
	Quayside	1827	
	Quaywalls	1834 1841 1847	
DOUGLAS or DOUGLASS Robert	Castlegate	1820 1827	1820-27
DRYDEN Henry	Church Street	1806	1806
FENTON Samuel	High Street	1806	1806-27
William		1820	
	Woolmarket	1827	
GILCHRIST John	Bowling Green Place	1834	1834-73
Charles	High Street	1841 1847	
Lambert	43 High Street	1850 1855	
	High Street	1858 1864 1873	
GILLIE John	High Street	1806	1806
GRAHAM James	High Street	1806	1806
MACE Benjamin	Bowling Green Ropery	1855	1855

Table 3.1 Continued

Maker	Address	Directory listed	Minimum period in business
MIDDLEMISS Matthew	High Street	1841 1847 1850 1855	1841-58
	Hide Hill	1858	
MILLER William	Bridge Street	1864	1864-87
	Western Lane	1873	
	45 West Street	1887	
		1897 (rope dealer)	---
MOOR James	77 Church Street	1834 1841	1834-41
MOORE, J	30 Ravensdowne	1887 1897	1887-97
PATTERSON J.M.D & Co.	Quaywalls	1850 1855	1850-87
	Castlegate & Quaywalls	1858 1864	
	Quaywalls, Castlegate & Greens	1873 1887	
SIMPSON Thomas	Hyde Hill	1806	1806-55
	Sandgate	1820	
	Palace Street	1827	
	1 Silver Street	1834	
	Hide Hill	1841 1847 1850 1855	
SMITH George & Son	44 High Street	1834 1841	1834-41
STEEL, --	Backway	1806	1806
WHITE Adam	High Street	1820 1827 1834	1822-34
WILSON Alexander George Wintrip	Backway	1806	1806
	Castlegate	1897	1897

III 19th century

Extending the scrutiny of directories into the next century proved rewarding and the results are included as Table 3, the first part (1) being rope makers who worked north of the river, in the township of Berwick itself, while the second part (2) lists ropers in the villages of Tweedmouth and Spittal, to the south of the river. Thirteen directories have been used and Table 3 has been constructed to present continuity on family names, similar addresses and a chronological jump from one directory to the next. This may of course be a false assumption. The two Bogues, to cite the first family name listed, may not have been related and the business, if there was a single one, may not have had an uninterrupted thirty-seven years run from 1827 to 1864. But Table 3 does at least provide a view of the town's main 19th century rope and twine makers. Doubts may be expressed that

**Table 3.2 19th century rope and twine makers;
South of the River.¹¹**

Maker	Address	Directory listed or other reference	Minimum period in business
CAISLEY Jeremiah	Tweedmouth	1864	1864-73
	Church Square	1873	
	3 Brewery Bank	1897	1897
DAVIDSON James	Tweedmouth	1855 1858 1864 1873	1855-97
	Kiln Hill	1887 1897	
DRYDEN Messrs	Tweedmouth	1806	1806
George & Sons		1820 1841	1820-41
Hugh		1847 1850 1855	1847-55
James		1827 1834 1841 1847	1827-47
		1865 ¹²	1865
John		1820 ¹³	1820
William		1827 1834 1841 1847 1850 1855 1858	1827-58
	New Road	1873	1873
M'BEATH John	Spittal	1834	1834

each and every one named in the directories was a manufacturer. It does seem possible that some were dealers in rope or twine and not actual manufacturers. But in the case of William Miller, he is shown to have been a rope dealer in 1897 after being listed as a maker in each directory from 1864 onwards. On this evidence the doubt expressed may be unfounded. Clearly, many of the addresses represent shops or homes rather than roperies. The more certain addresses of rope works or walks were the Greenses or Greens, Wellclose Square, Ravensdowne and Bowling Green Place, or ropery, against Benjamin Mace's name.

The inclusion of addresses in Table 3 can also point to 19th century rope and twine makers not always restricting themselves to the rope walk. Several were also sailmakers: e.g., J.M.D. Patterson (from 1855), William Bogue (in 1858) and J. Moore (in 1887). From 1858 onwards many of the twine makers also made lines for off-shore fishermen of south-east Scotland and north-east England, including William Bogue, Robert Davidson, Charles Lambert Gilchrist, Matthew Middlemiss and James Davidson. It is of interest that, in the 18th century tradition of Andrew Jameson above, two of the rope manufacturers, John Davidson and C.L. Gilchrist, were also grocers. The former was also the proprietor of the Brewer's Arms on High Street and the latter was the local agent for the National

Table 4. 19th century rope makers who were burgesses of Berwick¹⁴

Burgess	Qualification	'Made Free'	Trade	Residence
William Thomas Fenton	Ap* to Richard Simpson	3 July 1805	Rope maker	Berwick
Thomas Brown	1st son of Alexander	24 November 1806	Roper	Berwick
George Marshall	1st son of Ferrow	17 December 1806		
Archbold Weatherston	3rd son of Adam	26 March 1811		Tweedmouth
Thomas Brown	2nd son of Thomas	20 February 1815		Blyth
William Brown	Ap* to James Bell	23 January 1817		Berwick
Robert How	2nd son of James	22 February 1819	Twine spinner	
Richard Simpson	2nd son of Richard	1 December 1819	Rope maker	
James Wallace	1st son of John	22 January 1821	Twine spinner	New York, America
Fordyce Lough	3rd son of Mark	15 May 1824		Kelso
John How	3rd son of James	3 May 1826	Rope maker	Berwick
John How	2nd son of George	24 December 1830	Twine spinner	
John Mace	2nd surviving son of James, deceased	22 July 1841		---
William Smith	1st son of George, deceased	26 November 1849		Berwick
Thomas Statham Bannister	3rd son of James	1 October 1853	Rope maker	---
James How	1st son of Robert	14 November 1854	Twine spinner	Berwick
George Weatherburn	1st son of Elias	20 November 1855		---
Robert How	2nd son of Robert	9 October 1857		Berwick
William Christopher Wallace	3rd son of Samuel	31 December 1858		---
Thomas Lough	1st son of Fordyce	25 March 1863	Rope maker	Berwick
James Swinhoe Mace	1st son of John	6 January 1866	Twine spinner	---
William Lough	2nd son of Fordyce	11 January 1866		
John Mace	2nd son of John	27 May 1868		Berwick
George Wintrip Wilson	Ap* to William Bogue	27 December 1869	Rope maker	
Elias Weatherburn	1st son of George	31 July 1878	Twine spinner	
John Hush	2nd son of George			Berwick
James How	2nd surviving son of James	26 September 1885		---

* Apprentice

Insurance Company of Scotland. It would also seem that two of those listed, James Moor and George Smith & Son, spun only twine while John Miller Dickson, already seen to have been active in 1794, according to the 1841 directory, manufactured just rope. It is also possible to trace new occupations of ropers who abandoned the trade: James Dryden, for example, who after lengthy spells as a rope and twine maker, was described as a shopkeeper in 1864 and by 1873 was the publican of the Tweedside Inn, Tweedmouth.

An examination of the *Guild Roll* reveals that, in the course of the 19th century, there were twenty-seven burgesses who were rope makers or twine spinners (Table 4). Only three had

become freemen by having served apprenticeships while the remainder had entered the burgesses' ranks by the hereditary route. There were occasional instances of trained men leaving their trade and an example was Thomas Brown, a roper in 1817, who was listed as 'late mariner' of Berwick in the 1859 *Guild Roll*.¹⁵ Later lists also include updated information on individuals. For instance, the 1915 roll reveals that Elias Weatherburn and the second James How (Table 4) were by then resident in the town.¹⁶

When the first James How (Table 4) died on the 8th November 1923 he was, at ninety-one, Berwick's senior free-man. Born in 1832 he served his apprenticeship as a twine spinner and lamp dresser with the Bogues who had Low Ropery, next to Wellclose Square. Those whom James How served successively in the Low Ropery were:

- i George and William Bogue
- ii John Miller Dickson Patterson of Quaywalls
- iii Councillor John Davidson, grocer, High Street
- iv Messrs. Renton & Company.

As indicated in Table 4, James How, being the eldest son of a burgess, was himself made free in 1854 and sixty-three years later, in 1917, qualified, for the freemen's gold-headed staff, as the oldest surviving member. He had retired from Low Ropery a decade earlier, at the age of seventy-five.¹⁷ In 1979 the writer corresponded with Mrs. C. Marsh, a granddaughter of James How.¹⁸ Mrs Marsh remembered the Low Ropery 'in front of Berwick Infirmary' and as a girl had to take dinner and then tea to her grandfather. She would watch him 'dress the hemp on a spike-like box of needles and walk down the walk when spinning and tarring the ropes'. Mrs Marsh also recalled how James How would bring balls of twine home at nights to knit sheep nets for local farmers. She would 'fill the wooden needles and help to knit the nets on a shuttle held in the hand'. Mrs Marsh also remembered two other workmen at the Low Ropery: Jock Burns and freeman Elias Weatherburn (Table 4).

James How had in early married life suffered great loss. When aged thirty-one he had lost his wife, Christina, aged twenty-three,¹⁹ and their fifteen months old son, Alexander, from cholera.²⁰ His wife was the first victim of the October 1853 Asiatic cholera outbreak in Berwick. The Hows lived at the head of Tweed Street, near the railway station. Another victim was a nephew of the couple, George, the twelve year old son of John How, a rope maker, who lived nearby in Castlegate.²¹

When Tables 3 and 4 are compared there are only two freemen, out of the total of twenty-seven, who had their own rope making businesses, William Fenton and George Wintrip Wilson. The others appear to have been employees rather than employers, and, if the career of the first James How in Table 4 is typical of his fellow freemen-roperers, they could have served several masters in the course of their working lives.

The occupational returns from the census of 1841 provide a splendid opportunity of gaining an insight into the workforce in one particular year for the roperies north of the river. Table 5 includes all the ropers living in Berwick in 1841 but not in the neighbouring Tweedmouth and Spittal. The census returns also provide the birthplace – in broad terms – of each and when analysed reveal that only six of the thirty-four were not born in Berwick or the county of Northumberland. John and Benjamin Mace were Scots by birth, the younger William McPherson was a native of Ireland while the elder McPherson, George Mathison and Robert Patterson had not been born in Northumberland. The ages of the ropery workers ranged from fourteen to seventy-two with an average of thirty-seven years. The total of five apprentices, though only four are listed as such, suggests a healthy element in a workforce of thirty-four. This is borne out by the age profile (Figure 1) which, however, should not be viewed purely in statistical terms. The importance must be stressed of the skills possessed by those in the older age groups in a small scale industry which, in 1841, was not a century old.

Assuming that each trade directory entry represented a ropery, and doubt about this has already been expressed, the totals for each year can be compared and this (Table 6) point to 1841 being the peak year for the number of working roperies in Berwick in the 19th century and in the two centuries that rope was made. While it is not certain that all the Berwick-resident ropers worked north of the river the total workforce (thirty-four) spread over nine roperies is sufficient to point to the probability that the roperies were small scale, each with three or four workmen.

When Tables 4 (burgess-roperers) and 5 (1841 census returns) are compared there are only three entries that are common to both. William Brown, born in 1796, was made free in 1817; Robert How, born 1799, became a freeman at twenty-one; and John Mace, born 1819, was twenty-two when admitted to the freedom in 1841. When the directory and census returns, Tables 3 and 5 respectively, are compared it shows the advancing ages of ropery owners as the century progressed (Table 7). A further example of this, also drawn from the census returns, was John

Totals

(per group)

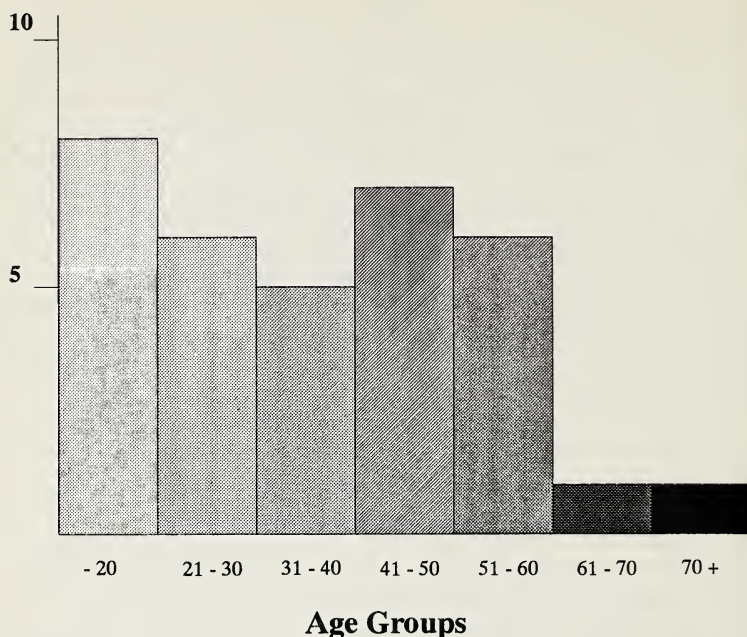


Figure 1. Age profile: roperies workforce, Berwick, 1841

Miller Dickson, referred to above as a rope manufacturer, whose occupation in 1841 was that of ship owner. He was then aged seventy, had moved from Quaywalls to the more imposing Wellington Terrace²³ and was shown not to have been a native of Berwick or Northumberland. Another manufacturer, also referred to, was J.M.D. Patterson and it is uncertain if he featured in the 1841 lists. But there was living on Quaywalls, Manners Patterson, aged fifty-five, a sailmaker. His son John, aged twenty, was an apprentice draper. As it was common in the 1841 returns to include only one Christian name, this therefore, could have been J.M.D Patterson, a future rope manufacturer who could have reached the age of sixty-six in 1887. Manners Patterson had not been born in Berwick or Northumberland but his son had been.

The means of identifying 19th century rope makers in this paper has by its nature resulted in numerous ropers not being mentioned. This is borne out by four examples, chosen at random, from obituary notices of 1849²⁴ and 1879²⁵:

At Berwick, 13th September 1849, Mary, wife of John Wilson, roper, Marygate, aged 55

At Berwick, 23rd November 1849, John Purvis, flax dresser, Church Street, aged 69

At Walkergate Lane, Berwick, on the 27th September 1879, Walter, son of Michael Marshall, roper maker, aged two years

At Chapel Street, Berwick, on the 6th October 1879, James, son of David Haswell, twine spinner, aged five years.

John Wilson, John Purvis, Michael Marshall and David Haswell are representative of numerous ropery workers who neither ran rope works nor were burgesses of the town.

Roperies were not very hazardous workplaces but the flammable materials used presented a fire risk and two outbreaks that occurred will suffice to illustrate the ever present risk. On the morning of Monday the 27th November 1865 a fire broke out in the ropery at the bottom of the railway embankment at Tweedmouth, occupied by James Dryden. The flaming tar quickly ignited hemp lying nearby...the whole building was soon ablaze. The fire engine from Berwick was not long in arriving but was rendered useless owing to an absence of water. A crowd quickly collected and began fighting the flames. They were joined by a party of Royal Naval Coast Volunteers who succeeded in preventing the fire from spreading to neighbouring property. The loss, estimated at about £150, was, according to a contemporary report, not thought to have been covered by insurance.²⁶ Fourteen years later, on Wednesday the 15th October 1879, fire broke out in the Castlegate ropery of J. Davidson. Once the alarm was raised plenty of assistance was available...the hose was put into operation and speedily subdued the fire, but not until £150 worth of damage was done. The cause of the accident was a spark, from the pipe of one of the workmen, landing on some hemp.²⁷

The rates of pay of some of the rope makers in 1799 are shown in Table 1 and in common with other crafts there arose in the course of the next century disputes about wages. In 1866, for example, there was unrest among the working classes throughout the country because of the high cost of foodstuffs and a growing demand for labour.²⁸ In the spring of that year the coopers of the north of England had been agitating for an advance of wages and in the second week of April the masters of those in Berwick and Spittal unanimously agreed to the

Table 5. Ropery workers resident in Berwick, north of the river, 1841²²

Name	Age	Trade	Address
Ralph Aird	24	Rope maker	Ropery Lane
John Anderson	30	Twine spinner	Hatter's Lane
George Bogue	72	Roper & grocer	Marygate
William Brown	45	Roper	Chapel Street
Joseph Chapman	55	Heckler	Greenses
John Cook	40	Rope maker	Coxon's Lane
Alexander Davidson	23		Roping house, Greenses
James Davidson	60		
Robert Davidson	35		Castlegate
Thomas Downs			Poorhouse Lane
Robert Dryden	55	Flax dresser	College Street
John Garrett	61		Marygate
Begbie Hood	55	Rope maker	Castlegate
Stirling Hood	20		
John How	30	Twine spinner	Woolmarket
Robert How	42		Church Street
John F. Lough	35		Marygate
William McPherson	45		Ravensdowne
William McPherson	15	Apprentice	
Benjamin Mace	24	Roper	Church Street
John Mace	22	Twine spinner	Sandgate
George Marshall	46	Roper	Chapel Street
George Mathison	53	Twine spinner	Ravensdowne
Matthew Middlemiss	45		Marygate
William Miller	20	Roper	Church Street
James Moor	20	Rope maker	Marygate
Andrew Nicholson	15	Twine spinner Apprentice	Hatter's Lane
Robert Patterson	50	Flax dresser	Ravensdowne
Arthur Pattison	15	Twine spinner	Church Street
William Pattison	14	Roper Apprentice	
Thomas Simpson	40	Rope maker	Hide Hill
James Sutherland	58	Flax dresser	Wallace Green
William Turner	15	Twine spinner Apprentice	Walkergate Lane
George Wilson	42	Rope maker	Marygate

**Table 6. 19th century rope and twine businesses,
Borough of Berwick**

	North of river: Berwick	South of river: Tweedmouth & Spittal	Totals
1806	6	1	7
1820	5	2	7
1827	6	2	8
1834	7	3	10
1841	9	3	12
1847	6	3	9
1850	6	2	8
1858	5	2	7
1864	5	3	8
1873	4	3	7
1887	4	1	5
1897	3	2	5

Table 7. A comparison of Tables 3 and 5

Rope maker	Age	
	1841 (Table 5)	In year of final directory entry (Table 3)
George Bogue	72	81 in 1850
Robert Davidson	35	67 in 1873
Benjamin Mace	24	38 in 1855
Matthew Middlemiss	45	62 in 1858
Thomas Simpson	40	54 in 1855

wages being increased by two shillings per week, making the weekly wages from 20s. per man.²⁹ The differences in wage levels and awards being made in various trades added to the unrest and late in April the twine spinners went on strike, the demand for three shillings a week additional wages not being conceded by the masters. The demand was for an advance on the meagre 18s. a week being received in 1866.³⁰ It was reported at the end of the first week of the strike that some ropers had already left Berwick to seek employment elsewhere and more were likely to follow.³¹ After 'being out' for nearly three weeks the employers offered an increase of two shillings a week and the men accepted.³² The twine spinners' strike of 1866, and those in most other trades, was over.³³

IV Roperies identified

The 19th century provided two outstanding plans of Berwick that allow the principal roperies to be positively identified. The first, a single sheet dated 1822, resulted from a survey by John Wood³⁴ and the second was the seventeen sheets of the Ordnance Survey's 1st edition 10 feet to 1 mile work of 1851³⁵ and 1855.³⁶

FROM JOHN WOOD'S SURVEY (1822)

1 Old Ropery (Also: O.S. 1855 Sheets 1 & 2)

Ran eastwards from behind the tollhouse at the top of Castlegate towards the Bell Tower and parallel to the 'Old Wall' or Edwardian fortifications. As indicated, this ropery, and others below, is shown on the first Ordnance Survey plans.

2 Low Ropery (Also: O.S. 1855 Sheet 5)

Sited to the north of Cumberland Bastion with the rope walk running parallel to the line of the Elizabethan wall. Later given the address, Wellclose Square. This is the ropery that C. Marsh, above, visited as a girl and as noted, it survived into the 20th century.

A general trade directory of 1894³⁷ referred to the ropery as Low Green Rope Works where John Davidson carried on a successful business as a manufacturer of rope, twine, nets, marquees and tents. He employed a number of hands in the making of salmon, herring and sheep nets. His ropes, twine and general cordage was mainly intended for farm use.

3 **Mr Smith's Ropeworks** (Also: O.S. 1855 Sheets 8 & 9)

Mr Smith could have been the George Smith included in Table 3 but this is not certain. The ropeworks were situated between Upper Church Street and the Union Street end of Canteen Lane.³⁸

4 **Berwick Ropeworks** (Also: O.S. 1855 Sheet 9)

Sited between and to the east of the icehouses in Union Street, in Bowling Green Place (now the Lions Gardens). This ropery was erected by the Berwick Ropery or Twine Company. The former line of the rope walk can still be seen as a ridge across the allotments of the Lions Gardens. This is another ropery that spanned into the present century, and it is, accordingly, shown on the 1924 edition of the 25 inch (to 1 mile) Ordnance Survey plan of the town.

In 1887 the ropery was re-let for ten years at £20 per year, payable in two instalments. The tenant was to pay all rates and taxes except the landlord's property tax; the landlord was responsible for the repair of the tar boiler cover and had to keep the premises in good repair. Prior to the re-letting the tenant had been Joseph Dixon Gilchrist (not listed in Tables 3-5) but he was replaced in 1887 by James Moor (Tables 3 and 5) and the works became known locally as Moor's Ropery.³⁹

5 **Old Twine Walk** (Also: O.S. 1855 Sheets 11 & 12)

Ran from a point across the footpath opposite the northern end of Fisher's Fort on the Elizabethan fortifications the length of the Avenue to Palace Street East.

FROM THE 1st EDITION ORDNANCE SURVEY PLANS
OF 1851 OR 1855, BUT NOT JOHN WOOD'S PLAN:

6 **Castlegate Ropery** (O.S. 1855 Sheet 5)

Situated on the left hand side of Castlegate, fifty metres north of the Scotch (later Scots) Gate. This was the ropeworks of the Davidsons (Table 3) and the 1887 address of R. Davidson & Son, of 5 Castlegate, pinpoints the ropery precisely.

7 **Well Square Ropeworks, Tweedmouth** (O.S. 1855 Sheets 13 & 14)

Ran south-west out of the Square towards the tannery of 1855.

8 **West End Ropeworks, Tweedmouth** (O.S. 1851 Sheet 7)

Ran from the end of the present West End Road, across the road

from the former Presbyterian Church, along the edge of the footpath to the Royal Border Bridge. It was, in 1851, adjacent to the Tweed Foundry. The works are not shown on the 1855 edition of the plan.

9 Railway Embankment South Ropeworks, Tweedmouth (O.S. 1851 Sheets 13 & 16)

Sited 210 metres north of the former Tweedmouth station on the eastern side of the York, Newcastle and Berwick Railway embankment. It ran from immediately north of the railway bridge over the Etal road towards the Two Tunnels. On the Ordnance Survey's 1855 edition only part of the 1851 rope walk is shown, on sheet 13 and not on sheet 16.

10 Railway Embankment North Ropeworks, Tweedmouth (O.S. 1855 Sheet 13)

Sited a short distance to the north of the previous ropery. This was the last ropeworks to survive in the Borough of Berwick and is dealt with below.

ROPERIES THAT POSSIBLY EXISTED BUT HAVE NOT BEEN POSITIVELY IDENTIFIED:

11 New Bowling Green Ropery, Berwick

Thought to have run close to and parallel to the south wall of the Berwick Bowling Club's green that is in use today. Approached from the town centre via the Cow Gate it had the Stanks on one side and the Magdalen Fields on the other.

12 Spittal Ropeworks

There could have been numerous sites available in the village. It is included because of the possibility of John M'Beath (Table 3) working there, and not just living, in Spittal. It must therefore be treated as doubtful.

V 20th century

It has been noted that two of the roperies north of the river continued production into the 20th century: the Low Ropery and the Berwick Ropeworks in Ravensdowne. By 1929 Mrs Jane Wilson had abandoned rope and twine making at the Low Ropery in favour of dealing in china at her Castlegate address (in 1934 and 1938). Table 8, compiled from trade directories, also

**Table 8. 20th century rope makers in
(i) Berwick and (ii) Tweedmouth⁴⁰
(18th century links and other reference shown in brackets)**

Maker	Address	Directory listed or other reference	Minimum period of business
i North of the river			
James Moor or Moore	30 Ravensdowne	(1887, Table 3) 1906	1900-06 (1887-1906)
Jane Wilson (Mrs)	Low Greens 43 & 45 Castlegate Ravensdowne	(1897, Table 3) 1906 1925	1900-25 (1897-1925)
ii South of the river			
John Andrews & Sons	154 Main Street	1925 1929 1934 1938	1925-38
Caisley Jeremiah	3 Brewery Bank	(1864, Table 3) 1906 To 1956 ⁴¹	1900-56 (1864-1873) (1897)
Son of Jeremiah	Railway Embankment (North)		
Edwin (grandson of Jeremiah)	Railway Embankment (North)		
James Skeen Davidson	6 & 8 Kiln Hill	(1855, Table 3) 1906	1900-06 (1855-1906)

indicated that at least another two survived south of the river. The writer remembers well the more northerly of the railway embankment roperies throughout the 1940s.

Then, in the hands of Edwin Caisley and his father, it was approached by way of a gate that clanked behind you. Its self-acting mechanism was a length of chain running from the gate over a cast iron pulley to a free falling weight: crude but effective and of a standard LNER design (Plate 5). The gate was a divide on the footpath that ran from the Main Street of Tweedmouth through 'The Meadows' of Town Farm and continued to skirt the foot of the railway embankment, passed the One Tunnel and so on to Osborne Road.

The ropery was sited to the south of the self-closing gate and could be approached by a stile or by a second gate, wider than the first, which carried the railway company's warning of 'KEEP THIS GATE SHUT'.

Edwin Caisley carried on his ancient craft single-handed after the death of his father. But he himself gave up in 1956 and the small ropery closed for good. The Caisleys had long been respected figures at their stance at Berwick Corn Exchange each Saturday where they supplied twine, ropes and sheep nets to the farming fraternity. But the passing of the horse and a changing agricultural scene resulted in a decline in business and Edwin Caisley was only forty-four when he abandoned rope making and sought other employment – that of a cinema commissionaire and later a petrol pump attendant! He died in 1978.

In the summer of 1965 Caisley's Ropery still remained outwardly intact (Plates 5-8) and the results of an initial survey that was carried out are shown in Figure 2. On returning twelve months later to measure the ropery every trace of the building had vanished. This incomplete record is the only surviving one of the Borough of Berwick's last ropery. The only visible reminders of the town's roperies are now stretches of ground that were once rope walks.

Evidence of earlier rope making in the district is even more scant. But as long as salmon have been drawn from the Tweed, and it is believed locally that the origins of salmon netting were pre-historic,⁴² ropes were needed. So the assumption must be that ropes and nets were made in Berwick several centuries prior to 1752. The rope making of the two centuries of the modern industrial era, 1752-1956, was, while it lasted, taken very much for granted. But, once lost, the skills of three generations of Caisleys and of many others, are more greatly appreciated and, now, missed.

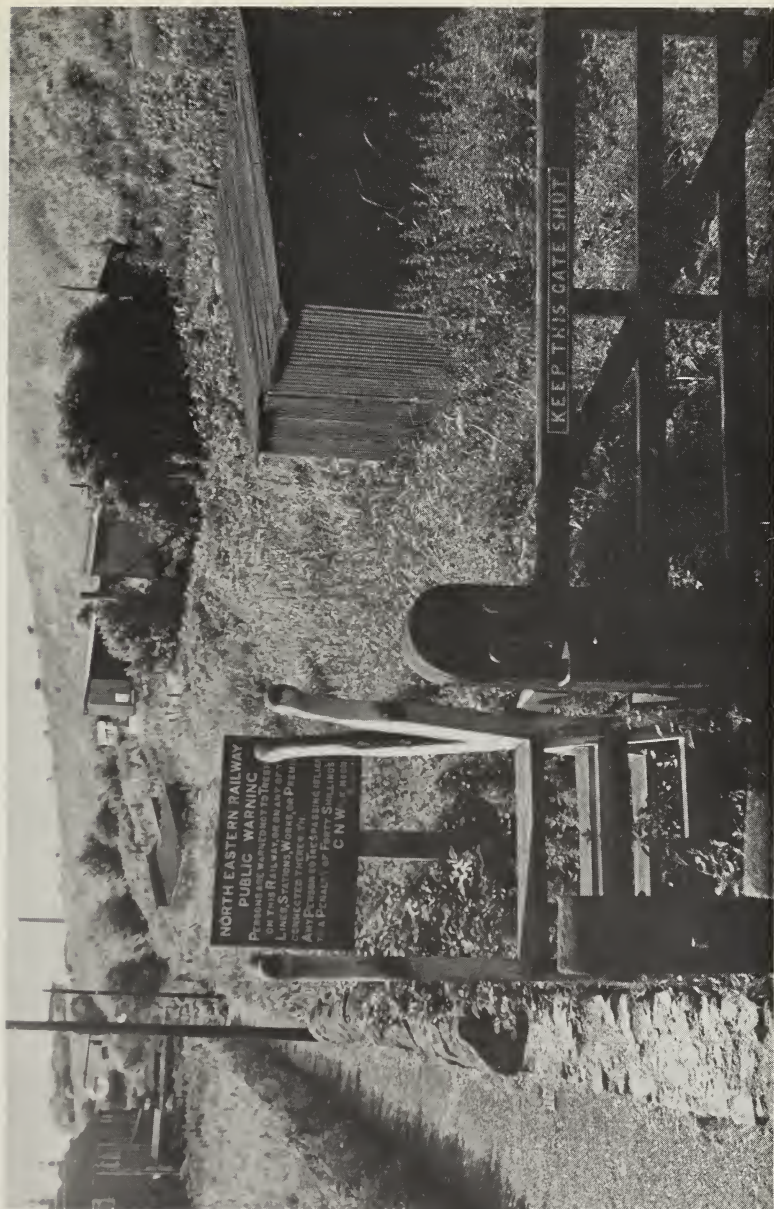


Plate 5. The Railway Embankment North Ropeworks (Messrs Caisley), Tweedmouth: photographed 1965. The building at the north end of the ropeworks, the gate and the LNE Railway's warning notice; and in the distance the building at the south end.

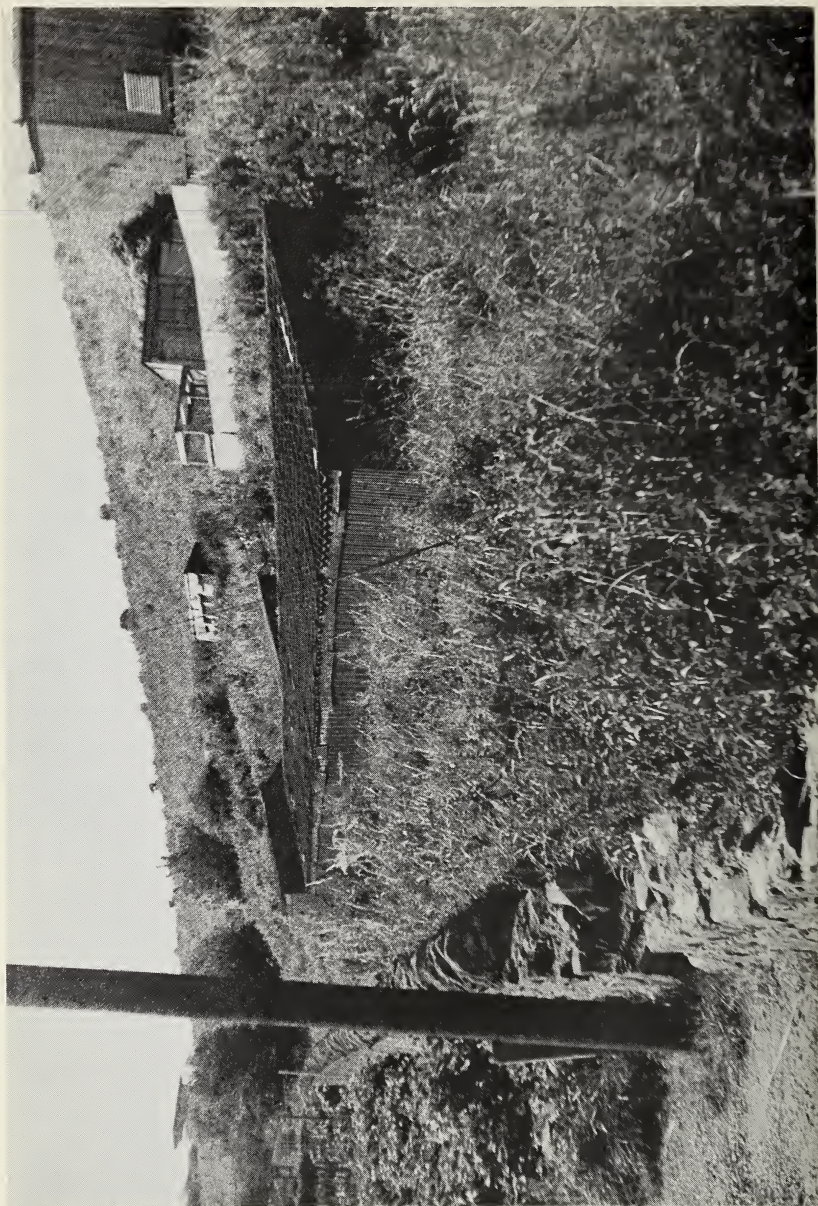


Plate 6. The same ropery; the building at the south end showing the peaked pantile roof.



Plate 7. The same ropery; the building at the north end.



Plate 8. The same ropery; the overgrown rope-walk.

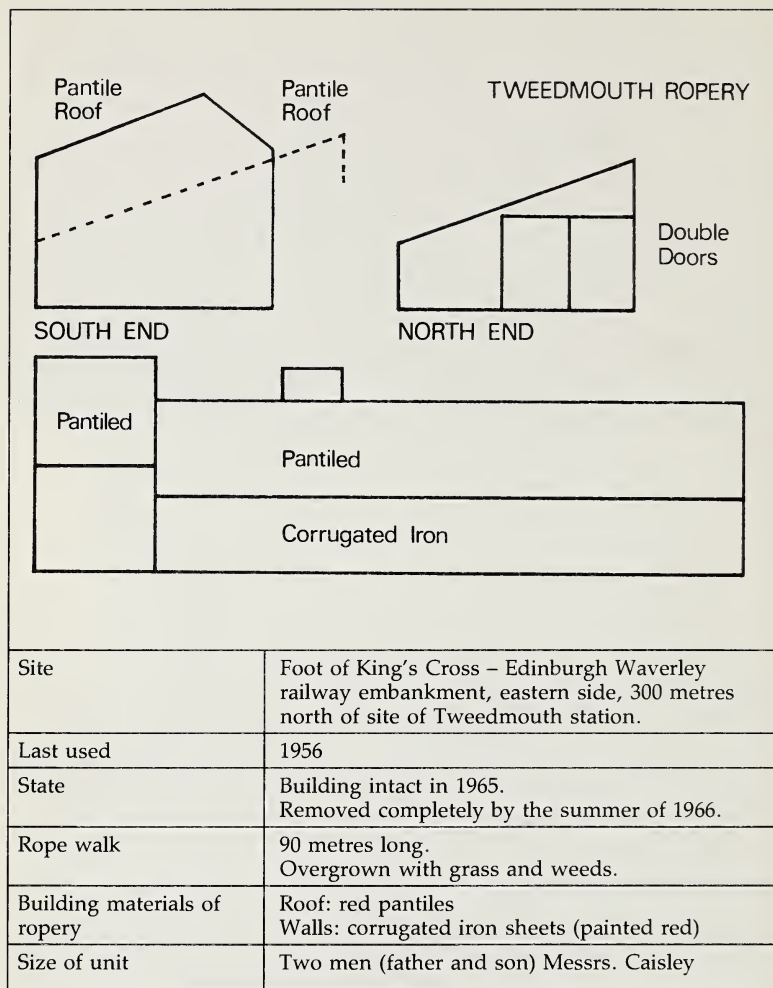


Figure 2. Tweedmouth Ropery survey, 1965-66

References and Notes

- 1 Berwick Record Office (hereafter BRO) B 2/4 Draft Guild minute book, 25 October 1751, 551-553.
- 2 John Scott *Berwick-upon-Tweed* London: Elliot Stock, 1888, 229.
Scott obviously obtained this information from a Guild minute book. When the present paper was being prepared, in October 1990, the minute book in question was not available, it having been removed from the BRO for rebinding. Hence the reliance on a secondary reference.
- 3 All except William Stow Lundie are listed in the *Guild Roll* of the 18th October 1774. William Stow Lundie, presumably dead by 1774, was undoubtedly a freeman, having been mayor of the town in 1745 and 1750. William Jeffreys was an attorney at law; Thomas Rutherford and John Procter were merchants.
Guild Roll, 1774, 2, 17 & 23.
- 4 Ferrow Marshall, admitted to the freedom of Berwick on the 22nd December 1775 after having been apprenticed to burgess Thomas Forsythe (i); James Landels (or Landles), made a freeman on the 29th January 1779 on completing his apprenticeship with John Hogarth (ii); and Richard Todd, as the second son of John, was made free on the 18th February 1789. At that time Richard Todd was described as being in the Excise at Newcastle upon Tyne (iii).
As these examples illustrate, there were, and are, two main ways of becoming a freeman of Berwick: by being the son of a freeman, the age of admission being twenty-one years; and males between sixteen and nineteen who were bound apprentices to a resident freeman, carrying on trade, business or profession within the Borough, for not less than seven years (iv).
 - i *Guild Roll*, 1796, 20.
 - ii *Ibid.*, 22.
 - iii *Ibid.*, 37.
 - iv David I. Moore *Notes for the guidance and information of the Freemen of the Borough of Berwick-upon-Tweed*. Berwick: Guild of Freemen, 1968, 7.
- 5 John Robertson: the second son of John, admitted to the freedom on the 14th November 1788.
Guild Roll, 1796, 37.
- 6 Scott, reference 2, above.
- 7 Compiled from:
 - i Scott, reference 2, above.
 - ii John Fuller. *The history of Berwick-upon-Tweed*. Edinburgh: Bell et alia, 1799, 380-381.
- 8 Compiled from the *Guild Roll*, 1796, 14, 28 & 46.
The *Guild Roll*, 1806, 32, shows George Allan to have been a clerk at Leith in that year: thus having ceased to be a flax dresser at Berwick.
- 9 *Ibid.*, 1774, 8.
- 10 *Universal British Directory*, 1792, 296-287.

11 Compiled from:

- i J. Good. *A directory and concise history of Berwick-upon-Tweed*. Berwick, printed: W. Lochhead, 1806, 48, 50, 57, 59 & 155.
- ii J. Pigot. *The commercial directory of..... and the four most northern counties of England, for 1820-21 & 22*. Manchester: J. Pigot, 1820, 253.
- iii William Parson & William White. *History, directory, and gazetteer of Durham and Northumberland*, I Leeds printed: Edward Baines, 1827, 495.
- iv Pigot & Co.'s *National commercial directory of* Northumberland. London: J. Pigot, 1834, 573.
- v Robson's *Commercial directory*, 1841, 41.
- vi White & Co.'s *General directory*. Sheffield printed, 1847, 727.
- vii Ward's *Northumberland and Durham directory*, 1850, 355.
- viii Whellan's *Directory*, 1855, 977.
- ix Kelly's Directories Ltd. *The Post Office directory of Northumberland and Durham* London: Kelly, 1858, 3-5.
- x Slater's *Directory* Manchester printed, 1864, 23.
- xi E.R. Kelly (Ed.) *The Post Office directory of Durham and Northumberland*. London: Kelly & Co., 1873, 469-470 & 472.
- xii T.F. Bulmer (Ed.) *History, topography, and directory of Northumberland*. Preston: T. Bulmer, 1887, 791.
- xiii Kelly's *Directory*. London: Kelly, 1897, 10, 12, 14 & 15.

12 James Dryden: occupied the railway embankment ropery, Tweedmouth, in 1865. *The Berwick Journal*, 1 December 1865, 3.

13 The partnership of George Dryden & Sons, rope makers, Tweedmouth, was dissolved on the 14th December 1821.

On the same day that the notice of the above was published, John Dryden, one of the sons in the former business, announced that he was carrying on as a rope manufacturer in Tweedmouth. *The British Gazette and Berwick Advertiser*, 15 December 1822, 4.

14 Compiled from the *Guild Rolls* for:

- i 1806, 46.
- ii 1817, 46, 51, 55 & 57.
- iii 1859, 13, 16, 19, 22, 29, 36, 44, 48-49 & 52-53.
- iv 1882, 26, 30-33 & 37-38.
- v 1889, 38.
- vi 1915, 20 & 25.

15 *Ibid.*, 1859, 6.

16 *Ibid.*, 1915, 20 & 25.

17 *The Berwick Journal*, 15 November 1923, 8.

18 C. Marsh of 43 Beech Green, Dunstable, to J.W. Bainbridge, 10 January 1980.

19 *The Berwick and Kelso Warter*, 28 October 1853, 2 & 7.

20 *Ibid.*, 4 November 1853, 2 & 7.

21 *Ibid.*

22 BRO HO 107 844 Census (of England and Wales) 1841. *Occupation abstract*. London, 1844.

23 As indicated in Table 3, J.M. Dickson's addresses between 1820 and 1847 were, according to the directories, the Quay (1820), Quayside (1827) and Quaywalls (1834-47) respectively. These could well have been his business addresses as an M. Dickson, Esq., was shown to be living at 1 Wellington Terrace on John Wood's town plan of 1822 (*Plan of the town of Berwick upon Tweed from actual survey*, Edinburgh printed).

- 24 *The Berwick and Kelso Warder.*
 - i 21 September 1849, 3.
 - ii 30 November 1849, 3.
- 25 *The Berwick Journal*
 - i 10 October 1879, 7.
 - ii 17 October 1879, 7.
- 26 *Ibid.*, 1 December 1865, 3.
- 27 *Ibid.*, 17 October 1879, 3.
- 28 *Ibid.*, 11 May 1866, 3.
- 29 *Ibid.*, 13 April 1866, 3.
- 30 *Ibid.*, 11 May 1866, 3.
- 31 *Ibid.*, 4 May 1866, 3.
- 32 *Ibid.*, 11 May 1866, 3.
- 33 *Ibid.*, 25 May 1866, 3.
- 34 Wood, op. cit.
- 35 Ordnance Survey Department 1st edition 10 feet = 1 mile (1:528) sheets (17) of *Berwick upon Tweed* (surveyed for the Local Board of Health under the provisions of the Public Health Dept.) Southampton: Ordnance Map Office, 1851. Copies available in the BRO (U 10/2).
- 36 Ordnance Survey Department 1st edition 10 feet = 1 mile (1:528) sheets (17) of *Berwick upon Tweed* (for general distribution) Southampton: Ordnance Map Office, 1855.
- 37 *General trade in Berwick-upon-Tweed 1894*. Berwick reprint, 1972, 26.
- 38 Both Union Street and Canteen Lane were later embraced within the present day Ravensdowne.
- 39 Francis M. Cowe. 'The Lions gardens'. *Berwick Bulletin*, 4 July 1979, 6.
- 40 Compiled from:
 - i *Kelly's Directory of Durham and Northumberland* London: Kelly's Directories Ltd., 1906, 12, 14 & 16.
 - ii *Ibid.*, 1925, 11-12.
 - iii *Ibid.*, 1929, 5.
 - iv *Ibid.*, 1934, 6.
 - v *Ibid.*, 1938, 6.
- 41 'Ropemaking days recalled' (feature). *Berwick Bulletin*, 15 November 1978, 6.
42. Berwick Salmon Fisheries Company Ltd. *A salmon saga*. London: Harley Publishing Co., 1956, 5.

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- Merrill, J.N. (1976) The cavern industry: north country rope-making. *The Countryman*, 81, 138-144.
- Rees, Abraham. (1819-1820) Rees's manufacturing industry (1819-1820). Reprinted (1972), 1, 156-157; 4, 330-351. Newton Abbot; David and Charles.
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AN ALBUM OF SCOTTISH FAMILIES, 1694-1696

Helen and Keith Kelsall,
21, Victoria Road, Sheffield, S10 2DJ.

FOREWORD

This, the first, instalment of the diary of George Home of Kimmerghame, has been published by Helen and Keith Kelsall under the above title (Aberdeen University Press, 1990. £14.95). It is hoped that there will be sufficient interest to support publication of further volumes.

Mr and Mrs Stuart Maxwell (16, Dick Place, Edinburgh, EH9 2JL) transcribed the diaries and have provided, also, maps and indices. They presented a copy of the volume to the Club's Library and now contribute, for the *History*, the following digest of its content.

W.H.R.L.

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George Home of Kimmerghame was born in 1660. At the age of 17 he was married to Jean Home, then aged 12, heiress to the Ayton estates. The young girl was kidnapped by a number of Home lairds, taken across the Border and married to George. The Scottish Privy Council was outraged and the young couple were fined and imprisoned for three months in Edinburgh Castle. Jean died five years later, but George pursued his claim to the Ayton lands with true Border tenacity for the rest of his life. He married again in 1691, but his wife died a year later leaving George to bring up their son, Robie. When his Diary starts, therefore, George is a widower of 34, living with Robie in Kimmerghame House (not, of course, the present one); he has two unmarried sisters and a younger brother, David (who died later on the Darien expedition), to whose maintenance he has to contribute. He was a minor laird, owning land around Kimmerghame and near Greenlaw, constantly borrowing money and always optimistic that his claim to Ayton would solve all his problems.

He kept a diary recording all that went on around him from 1694 to 1705, the year of his death: the four volumes were in the library of Marchmont House early this century, but sadly only the first three original volumes survived the dispersal of that collection. These were eventually deposited in the Scottish Record Office in 1979 (GD1/891/1-3); luckily a typescript was made of all four volumes and they are also in S.R.O.

(GD1/649/1-4). The typescript has many small inaccuracies, so for this publication a new transcription has been made by us from the original. Helen and Keith Kelsall's introduction is principally a genealogical account of the families mentioned in the diary – not only Homes, but Kers, Douglasses, Elliots, Johnstones, Pringles, Rutherfords, Trotters and Waddells. They have also identified as many as possible of the other men and women named, and have added explanatory notes.

George Home was not an agricultural reformer! His interest in his land is in the rent he gets from it; and he leaves it to one of his tenants to be his 'agent', whose accounting he questions without showing much knowledge of farming. His garden is another matter. He buys trees and seeds and is much interested in apples, pears, plums, apricots and peaches and notes when his strawberries and "artichoks" are ready. We know nothing of his formal education, but his books are in French and Latin as well as English (he spent almost two years in France) and his reading ranges from the classics and history to economics. He buys books regularly and worries about his extravagance; he also lends and borrows books. He was not a lawyer but is manifestly knowledgeable about the law. In Edinburgh he pursues his Ayton interest but is also used by Sir Patrick Home (his father's cousin) as a kind of unofficial adviser and agent, a rôle which increased when Sir Patrick became Earl of Marchmont and Lord Chancellor. He keeps us informed daily about the weather, and while not exactly a hypochondriac, his own and other people's healths interest him. His constant round of visits to neighbours is punctuated by reports as to who is ill; and with what.!

Duns ("Dunse") is of course his nearest town. As a Commissioner for the collection of the cess, George goes there for meetings, and it is his nearest market; he records whom he meets, what they drank and where. In February 1696 there is a scare of a French invasion; the militia and the fencible men are mustered and George is nominated as a heritor responsible for "listing the young unmarried fencible men". Both he and his brother David were involved in the collection of the Poll Tax and his constant references to the difficulties of collection make interesting reading in 1991. Although not a wealthy man he was an early and substantial subscriber both to the newly formed Bank of Scotland, and to the "Indian and African Company" (the Darien Scheme).

The first two volumes of the diary cover the years 1694-1700 – the seven ill years at the end of the century when a succession of bad harvests brought famine and distress to Scotland as a whole

but particularly to the rural areas.

While the Merse may not have been as badly affected as other parts of Scotland, it is surprising that none of the difficulties of these years comes through in the diary. Only a single rather oblique reference comes in the third volume when George comments, in June, 1701, that many weddings are taking place in the Merse: country folk have abstained from marrying for some time but "now the victual being cheap they will marry very fast"!

THE FOSSILS OF FOULDEN, BERWICKSHIRE

W.D. Ian Rolfe

Keeper of Geology, National Museums of Scotland, Edinburgh

Although fossils can be found throughout much of the lower Carboniferous of Scotland, few good faunas and floras are known from the Carboniferous Cementstone Group of rocks, from about 350 million years ago. One site that has been found to yield a significant fossil assemblage is that formerly called the Crooked Burn, but now known simply as Foulden, from its locality on the bank of the Foulden Burn near Foulden Newton Farm, 8 km NW of Berwick upon Tweed (NT 9255). It allows us to build up a picture not only of the harsh, equatorial environment of that time, but also of some of the possible ecological interrelationships within a temporary lake. In addition, the fossils tell us much about the nature of some previously little known animals and plants.

History

Fish fragments were found at Foulden as long ago as the 1860s, but it was not until 1910-1912 that they were obtained in abundance by T.M. Ovens, a local collector who died at the age of 19 in 1912. These finds were described in 1927¹ by Errol White and the plants by W.N. Edwards of the British Museum (Natural History), who mentioned some of the earliest fossil seeds then known. These were drawn to the attention of Dr A.G. Long, who has made major contributions to elucidating the early evolutionary history of such seeds. In 1964 he illustrated a 2-metre-long seed-fern plant fragment, excavated from this site by staff of the Royal Scottish Museum, Edinburgh. Dr Long, a former President of this Society, collected at the site on several occasions, most recently in 1985 (Long 1987), and published his results.² In 1961, Foulden was scheduled as a Site of Special Scientific Interest of the Nature Conservancy Council.

Mr Stan Wood³, subsequently to become well known as the discoverer of "Lizzie", the earliest known reptile, had looked at Foulden fish collected by Ovens and Long in the Royal Scottish Museum and noticed in one slab that they were present on at least two horizons. This suggested they might be abundant

enough to collect commercially. He also recognised an ecological imbalance in the fauna, implying that certain elements had yet to be found fossil. After several fruitless visits to the area, Mr Wood, by then at the Hunterian Museum of Glasgow University under the auspices of the Manpower Services Commission, relocated the fish bed by trench-sectioning the bank of the Crooked Burn. Little was previously known about the distribution of fossils within the Foulden rock sequence, but Mr Wood rectified this during 1980-1981, collecting over 500 specimens and recording 29 metres of the succession in detail.

Dr C.D. Waterston, Keeper of Geology at the Royal Scottish Museum, assembled a team of specialists to report on these collections. Their results were published in 1985, and this account is summarised from that fuller version⁴.

The rocks and the environment of their deposition

The Cementstone Group is the name given to mudstones and shales interbedded with cementstones,⁵ siltstones and sandstones near the base of the Carboniferous. Taken on its own, the Foulden Cementstone Group succession is too limited to make any interpretation of its environments of deposition. These rocks extend throughout the Midland Valley of Scotland, into Northumbria, Northern Ireland and eastern Canada, and it is possible to deduce the conditions under which the rocks were laid down by considering the Group as a whole. The general lack of fauna from the Group, together with evidence of evaporation such as natural casts of salt crystals, gypsum, anhydrite and desiccation cracks indicates that the environment was semi-arid, with isolated shallow water basins that frequently dried out before a fauna could become established.

About 23 metres of the Foulden sequence are typically Cementstone Group in being poorly stratified, containing many cementstones, and in being practically unfossiliferous. The nature and internal structures of these rocks⁶ suggest that they formed as sediment laid down on floodplains of large rivers on an alluvial coastal plain, frequently inundated by fresh floodwaters and marine storm-tides.

Five beds, totalling 6 metres thick near the top of the Foulden sequence, differ from the rest of the succession in being well bedded, in containing only small cementstone nodules and in yielding many plant and animal fossils. Indeed, in the field, Stan Wood found that three of these beds contained such different fossil assemblages that he called them the Shell Bed

(0.08m thick), the Plant Bed (0.4m) and the Fish Bed (1.1m). These beds probably formed as deposits in a semi-permanent lake on the floodplain, which gradually became deeper until it reached a maximum depth of about 5 metres. Eventually, the lake silted up with sediment carried in from flooding river channels. A reconstruction of this environment⁶ is shown as Figure 1.

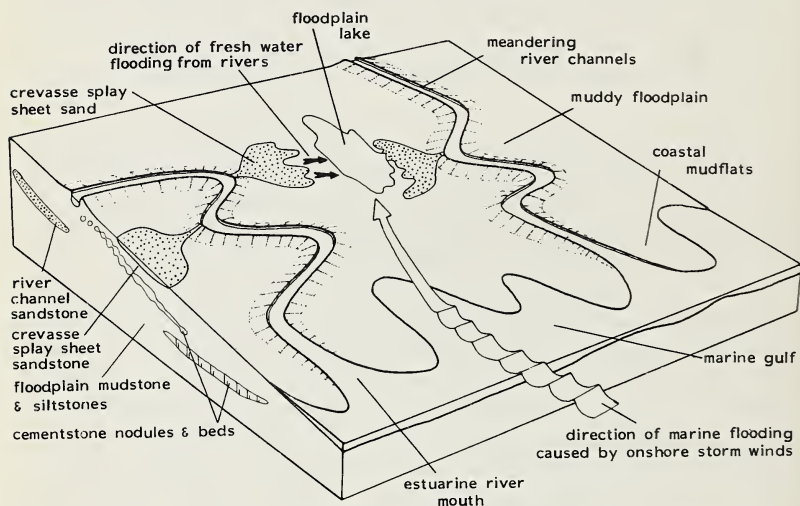


Figure 1. Reconstruction of the Foulden Cementstone Group environment, 350 million years ago. The block represents an area tens of kilometres square; vegetation is not shown (from Anderton⁴).

The uniqueness of such a fossil occurrence indicates that these conditions only rarely developed: most lakes were ephemeral, and dried out before a fauna could become established.

The fossils

Fishes. Representatives of all the major groups of fishes are found at Foulden: sharks, primitive bony fish and lobe-finned fish. Many of the Foulden fecal masses, or coprolites, up to 25mm long, were probably produced by these fishes, according to Pollard.⁴

Sharks are known from only one tooth of *Lophodus* type – a general name for flattened teeth for crushing tough food such as molluscs and crustaceans. Almost as rare is one of the primitive bony fish, a coelacanth cf. *Rhabdoderma*, known from three specimens, showing some relationship to the older, Devonian coelacanth *Diplocercides*.

Most present day fishes belong to one group that has dominated the waters since Palaeozoic times – the Osteichthyes or bony fishes. The earliest of these fishes, the acanthodians, look superficially like living fishes, yet in detail are quite different: they bear prominent paired spines along the front of each of the fins, as well as in a row along the underside of the body. Their tails resemble those of sharks in having the upper tail lobe longer than the lower. Two acanthodians are found at Foulden, *Acanthodes ovensi*, which reaches 90mm long, and isolated fin spines and fin supports of *Gyracanthus*, a fish which elsewhere reaches 2 metres long. Most of the *A. ovensi* are small, probably young individuals 25-60mm long. One slab was crowded with 173 young specimens of this fish, and Forey and Young⁴ were able to confirm the pattern of bony scale development in this species. Scale cover begins posteriorly, and spreads forward as the animal grows, eventually extending on to the roof of the head in the largest individuals (Figure 2).

The commonest fishes at Foulden belong to the earliest group of ray-finned fishes, the palaeoniscoids, and five species are present. These fishes are important evolutionarily since it is possible to trace back to them all later types of ray-finned fishes, including today's dominant bony fishes, the teleosts. In studying the evolution of fishes and their descendants, the land vertebrates, knowledge of the structure, function and development of the head region is required. Since the palaeoniscoid fish skull bones show a pattern that is present in later ray-finned fishes, much research work on this group concentrates on working out that pattern of bones. This is not easy for the Foulden material, but the advance in knowledge made by Gardiner⁴ can be seen by comparing his drawings of skulls with those by White from 1927 (Figure 3). The new material enabled

Gardiner also to show that these fishes were not all new and endemic to Foulden, as White thought, but could be synonymised with species and genera described elsewhere from the Cementstone Group. A start on this process began in 1937, which unfortunately meant the loss of the eponymous *Fouldenia ottadinica* White in favour of *Styracopterus ottadinicus* (White)! Ovens is still commemorated though, by *Phanerosteon* (= *Carboveles*) *ovens*i (White). This unusual genus owes its name to the fact that it has lost most of its body scales, as in sturgeons.

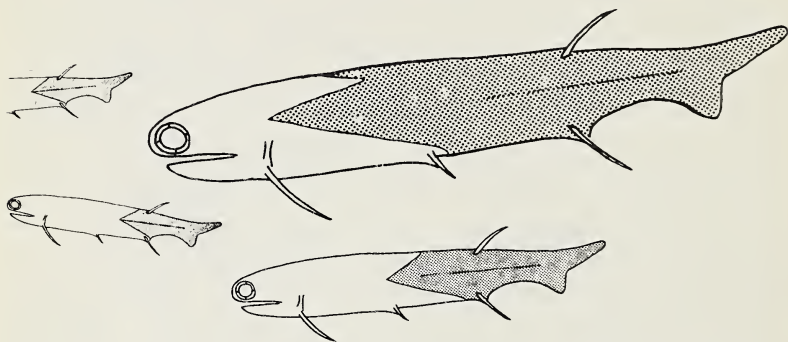


Figure 2. Young Foulden *Acanthodes ovensi* White, natural size. Notice the different extent of scale covering (stippled) in the different aged individuals (reconstructions after Forey and Young⁴).

The most significant fish found at Foulden is the first complete rhizodont lobe-finned fish known (Figure 4). This is a remarkable fact, given that the first rhizodont was described, from Scotland, almost 200 years ago, in 1793. A full account of this fish is given in the article which follows, based on the work of S.M. Andrews⁴. One other lobe-fin may occur at Foulden, but it is known from only one specimen, a large scale collected by Ovens and originally thought to be rhizodont, but redescribed by Andrews⁴ as a possible lung-fish.

Arthropods. The most interesting invertebrate fossils of Foulden are arthropods: a new king crab, a new scorpion, fragments of the large water-scorpion (eurypterid) *Cyrtoctenus* and two shrimps.

The king crab, *Rolfeia fouldenensis* Waterston,⁴ is unusual not only in having fixed as well as movable spines around the margin of the abdomen but in having a separate, spinose first segment to the abdomen (Figure 5). Such spines may have served to support this king crab, by snow-shoe effect, on the soft silty substrate of Foulden. *Rolfeia* shows interesting features linking modern king-crabs to ancestral Devonian forms, and is the earliest member of the primitive family Paleolimulidae.

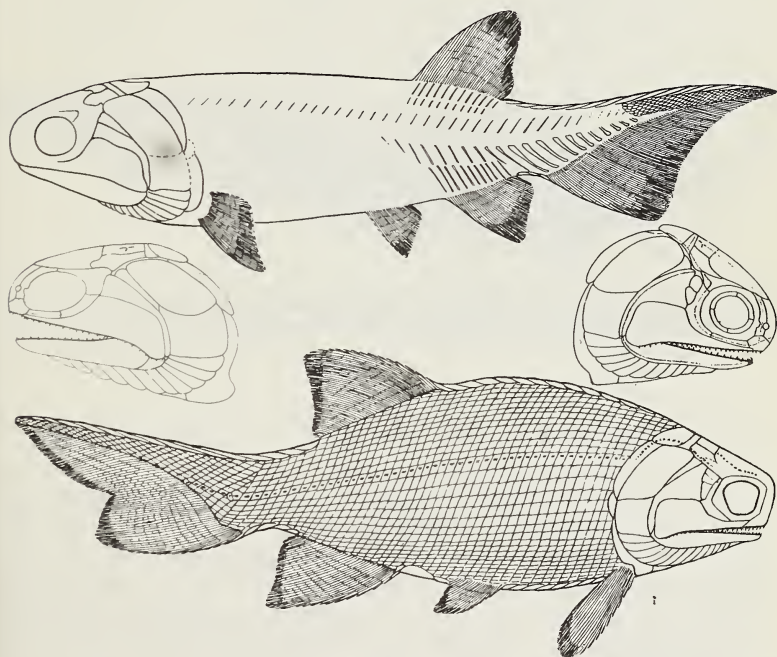


Figure 3. Two Foulden palaeoniscoid fishes, showing the reconstructions of the complete fish prepared by White (1927) and, for comparison, the 1985 reconstructions of the skull bone patterns prepared by Gardiner⁴. The upper fish is *Phanerosteon* (= *Carboveles*) *ovens*i (White), the lower is *Aetheretmon* *valenticum* White (both fishes 75mm long).

Fragments of scorpion from Foulden belong to large forms *ca.* 250mm long. Some of these were referred to a new form, *Trachyscorpia squarrosus* Kjellesvig – Waering 1986, while others were compared to *Gigantoscopia willsi* Størmer, an amphibious scorpion from the Carboniferous of Dumfriesshire (Waterston⁴). Scorpions are unique among terrestrial chelicerates in having recognisable aquatic forebears (Selden and Jeram 1980), but unless the respiratory organs can be found in a particular fossil scorpion, one cannot be certain if it was aquatic, terrestrial or amphibious. The Foulden scorpions lack such evidence.

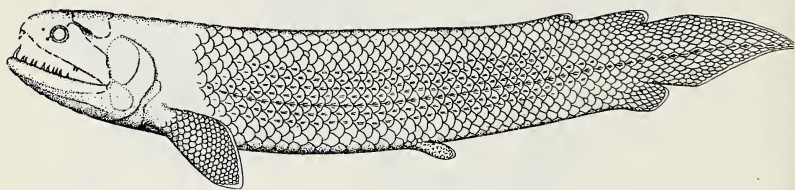


Figure 4. The Foulden lobe-finned fish *Strepsodus? ancylonomensis* Andrews⁴, reconstruction based on an entire specimen 345mm. long.

Until recently, much confusion existed over another huge supposed scorpion collected from Foulden by Ovens.⁷ This was originally identified as *Glyptoscopia caledonicus*,⁸ a species which had originally been misidentified as a plant! The problem was that most of the material consisted of isolated enigmatic fragments (Størmer and Waterston 1968), and it was not until 1985 that a complete 1½ metre (5 foot) long animal was described from South Africa by C.D. Waterston and others. Their work proved that this was an unusual water scorpion (eurypterid) that bore combs on its legs, probably for filtering shrimp from the waters through which this animal might have paddled. The new Foulden material includes a fragment of a head bearing eyes, probably from an individual of *Cyrtoctenus peachi* Størmer and Waterston *ca.* 630mm long⁹ (Figure 6).

The shrimps of Foulden have been re-identified by Briggs and Clarkson⁴, and found to be species confined to the Carboniferous sedimentary basin situated south of the Southern Uplands massif. *Bairdops elegans* (Peach) is rare at Foulden, and this record and that of *Belotelson traquairi* (Peach) are the oldest known occurrences of these genera (Figure 7).

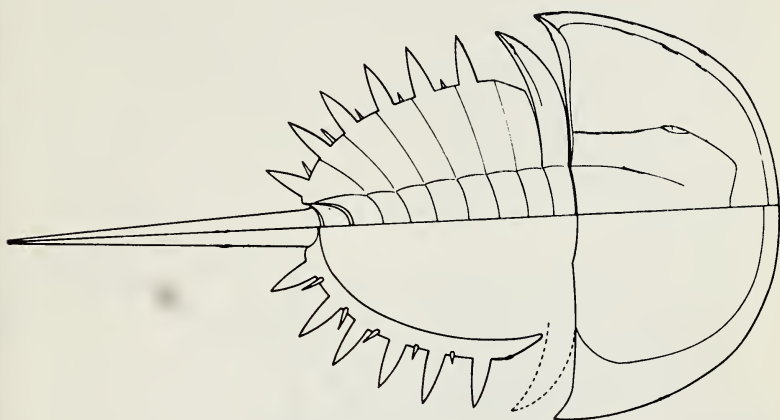


Figure 5. The Foulden king-crab *Rolfeia fouldenensis* Waterston,⁴ reconstruction showing the top surface (above) and lower surface (below); 70mm long.

Other invertebrates. The bivalve mollusc *Modiolus latus* (Portlock),¹⁰ spirorbid worm tubes, paraparchitid and cyprid or cavellinid ostracods which occur resemble those from other rocks of this age elsewhere.¹¹ They are thought to be species which tolerated a wide variety of fresh to brackish water conditions, an idea which may be confirmed by the lack of fully marine fossils from Foulden.

One fossil was provisionally identified as a millipede, but after closer study proved to lack any diagnostic features of that group. Almond⁴ considered it to be a segmented worm of unknown affinity, and named it accordingly *Polylurida aenigmatica*.

Plants. The Foulden fossil flora is the most diverse known from this period in Scotland, and possibly from Europe, according to Scott and Meyer-Berthaud,⁴ who cite species lists. Only a few comments can therefore be made here. Many challenges arise in palaeobotany from the need to assign

different plant organs – leaves, twigs, seeds, sporangia, spores etc. to particular plants, when they occur as disassociated fossils. Bed-by-bed collecting, such as occurred at Foulden, can reduce the possible permutations. The most important discovery concerns *Tristichia ovensi*, a seed fern studied by Long which Scott and Meyer-Berthaud suggest bore uncupulate seeds and lateral clusters of small male organs of a new type.

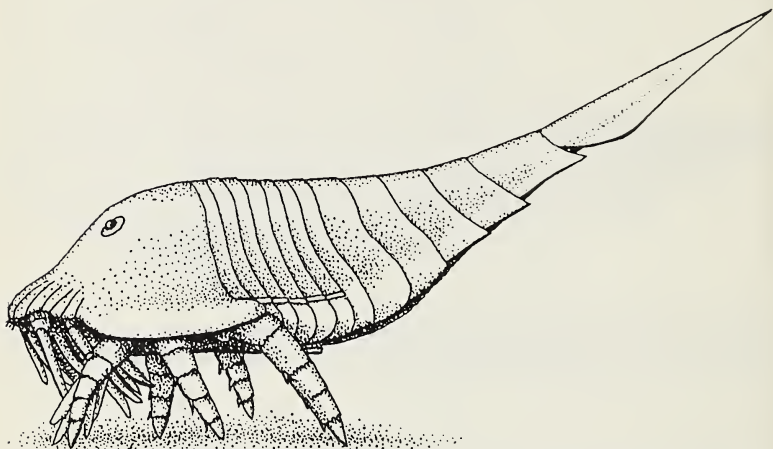


Figure 6. Reconstruction of the Foulden water scorpion (eurypterid) *Cyrtoctenus peachi*? Størmer and Waterston, at least 630mm long.¹³

At least 40 different plant spores were extracted from eight different horizons in the sequence. When compared with the established zonation of the British lower Carboniferous, these assemblages permit correlation with one Biozone – the *Schopfites claviger* – *Auroraspora macra* (CM) zone, of late Tournaisian age, about 350 million years ago.¹²

Palaeoecology

A technique used to great effect in studying a Carboniferous shale in Indiana was applied to the Foulden Fish Bed. A 1.3 sq.m. slab of the Fish Bed 310mm thick was lifted (Plate 1), removed to the laboratory, stripped off layer by layer, and the

fossils recorded in detail.¹⁰ The results of this detailed analysis gave an insight into the changing conditions of the ancient Foulden ecosystem. On the whole it revealed a mutually exclusive relationship between the vertical distribution of palaeoniscoid fishes and the shrimps.

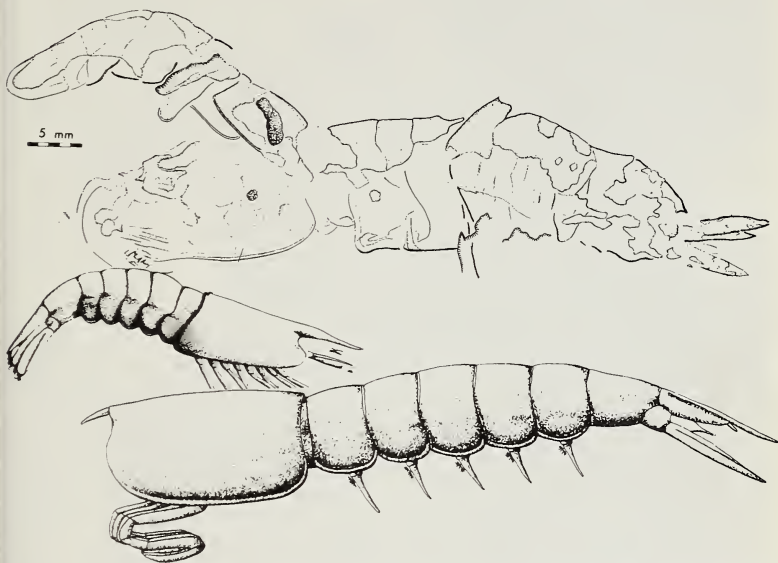


Figure 7. Drawing of the best preserved specimen of Foulden shrimps (above), showing *Belotelson traquairi* (Peach) (top left), overlapping *Bairdops elegans* (Peach) (from Briggs and Clarkson⁴). The reconstructions of these species (below) are by Schram,¹⁴ based on better preserved material from other Borders localities.

Overall, Clarkson⁴ suggested the following broad sequence of ecological changes in the former Foulden lake. Initially, the lake had a high water level, allowing large predatory rhizodonts to thrive, while the substrate was firm enough to support bivalves capable of withstanding a wide range of salinities. Inflows of mud led to a soft substrate with infauna, and the establishment of a brackish lake assemblage of shrimps, but few fish. The lake level then rose introducing palaeoniscoid fish, adapted to a lower salinity inimical to shrimps and infauna. A fall in water level may then have been responsible for the mass-death of young acanthodian fish, but optimal salinity and food availability thereafter prevailed, until the Foulden lake silted up.



Plate 1. The Foulden Fish Bed being lifted in 1981 by Mr Stan Wood, for laboratory analysis.¹⁵ Photograph courtesy of the Hunterian Museum, University of Glasgow.

At one horizon, in the fuller sequence, some of the scale trees *Lepidodendron* bear their associated *Stigmaria* "roots", suggesting they grew locally on the wet flood plain or lake margin. At other horizons, they and other plants were obviously transported some distance, perhaps from several different environments, where their original ecology remains unknown (Scott and Rex, 1987).

ACKNOWLEDGEMENTS

The Club acknowledges, with thanks, permissions to reproduce illustrations to

Dr. Rolfe's paper as follows:

The Royal Society of Edinburgh.

Field Museum of Natural History, Chicago, Illinois, USA. (*Fieldiana: Geology*, 40).

The Sunday Times.

NOTES

1. For a synopsis of this work and further details about Ovens, see Long (1960).
2. See references in Scott.⁴
3. See Casciani 1991; Milner *et al.* 1986; Rolfe 1986, 1990; Rolfe and Paton 1990.
4. See list of references in paper which follows, by C. Badenoch. The volume was compiled and edited by the present writer, who is indebted to the Royal Society of Edinburgh, and the authors indicated in the Figure captions, for permission to reproduce copyright illustrations here.
5. Cementstones are beds or nodules of fine-grained iron-rich, muddy limestone containing the mineral dolomite: calcium magnesium carbonate.
6. See R. Anderton.⁴
7. Referred to in *The Border Magazine*, 1927, 33, p. 147.
8. White, 1927, p. 286.
9. Waterston *et al.* 1985, Figure 10j. Elsewhere, *Cyrtoctenus* reaches at least 2 metres long.
10. Wood and Rolfe.⁴
11. Pollard.⁴
12. Clayton.⁴
13. Based on a drawing by C.D. Waterston (courtesy of Chris Sargent, *The Sunday Times*, 7 January 1990).
14. Schram, F.R. (1979) British Carboniferous Malacostraca. *Fieldiana: Geology*, 40, 1-129. Reproduced by courtesy of the author and The Field Museum of Natural History, Chicago.
15. An illustration of the Fish Bed fully marked up, being recorded prior to removal, can be seen in Rolfe (1986).

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GIANT FISH FROM THE FOULDEN BURN FOSSIL BEDS

C. O Badenoch

Nature Conservancy Council,
38 Gala Park, Galashiels TD1 2LY.

As an extension of the important palaeobotanical work carried out by Dr Albert G. Long, a Past President of the Club, on these fossil beds (for instance see the *History*, 43, 55-61 and 44, 24-36), members may be interested in the following extract from the Nature Conservancy Council's *Topical Issues* (Volume 4, No 1, March 1988), reproduced here by permission of Dr D. Norman, Palaeontology Unit, Earth Sciences Division, Nature Conservancy Council.

Fossil fish do not, for the most part, attract the level of attention given to the more glamorous or bizarre denizens of former times, such as giant sea reptiles, woolly mammoths or dinosaurs. This bias is more reflective of human quirkiness than anything else, because the fossil record of fish is richer and can be studied in far greater detail than that of any other vertebrate group. For its size, Britain has a remarkably rich fauna of fossil fish, and nearly 50 sites are of national or international importance. Our rocks contain the remains of early fish mainly in rocks of Silurian and Devonian age and most of the best sites lie in Scotland.

An example of important work relating to fossil fish is the recent excavation of the fossil bed at Foulden Burn, a Site of Special Scientific Interest (SSSI) in Berwickshire. Fragmentary remains of ancient fish have been found here since the mid-nineteenth century, and the first published report on fossils from this site was produced by Sir Archibald Geikie as long ago as 1864. The rocks of this area were laid down in the Lower Carboniferous Period – about 320 million years ago. In the past, the fossil remains found at this site were relatively poor in quality, consisting mainly of isolated scales, teeth and bones of the type of fish known as the crossopterygians or 'lobe fins'. These fish are of considerable interest to evolutionary biologists because they include the probable ancestors of the first land-dwelling vertebrates: the amphibians.

In the 1980s further excavations at Foulden Burn by Dr Mahala Andrews (1985) brought to light new material, including some almost complete, small (probably juvenile), speci-

mens. Most of these specimens belong to the family Rhizodontidae. Rhizodontids are normally very large fish, probably reaching six or seven metres in length, but until now they have been frustratingly poorly known, usually only from fragmentary teeth and scales, despite their world wide distribution in rocks of this age. The reason for their poor state of preservation is unknown, but may be due to their bodies rotting quickly after death, or the fact that they were such large creatures that scavengers had plenty of time to dismember the body and scatter the bones and other inedible fragments prior to burial and eventual fossilisation. There is also good logistical reason why entire fossils are not found in older collections – their sheer size! No amateur collectors digging in busy quarries in the last century could hope to lift such huge fossils.

The new specimens described by Dr Andrews are of great importance because they are the first complete remains of this sort of fish ever recovered, and they provide an opportunity to clarify the appearance, relationships and way of life of these puzzling animals. The remains indicate that these fish were long-bodied with large-toothed 'grinning' mouths and large eyes, all of which point to a predatory lifestyle. There are also large pectoral fins just behind the head, which would have been used for manoeuvring; most of the propulsive fins are clustered around the end of the tail in a way very reminiscent of a modern pike. All these features point to an aggressive fish, probably pike-like in habit, which lurked in ambush for passing fish and caught them in a sudden burst of speed.

Very large rhizodontids would have been able to swallow whole prey with ease, but the smaller ones probably fed in a shark-like manner. The teeth of these creatures are very long, with thick bases and deep roots; clearly they were strong and rigidly attached. It seems that these fish clamped their formidable jaws on to the sides of their prey and proceeded to twist their jaws (powered by corkscrew movements of the tail and paddling movements of the pectoral fins), or shook their head up and down so that their prey was torn into manageable chunks.

Another unusual characteristic of these fish is to be found on the flanks. Most fish possess a faint line running down the side of the body from head to tail, known as the lateral line, which is a sensory organ used for detecting underwater vibrations, akin to hearing on land. Rhizodontids, however, appear to have not one but seven lateral lines (a main one and six subsidiaries).

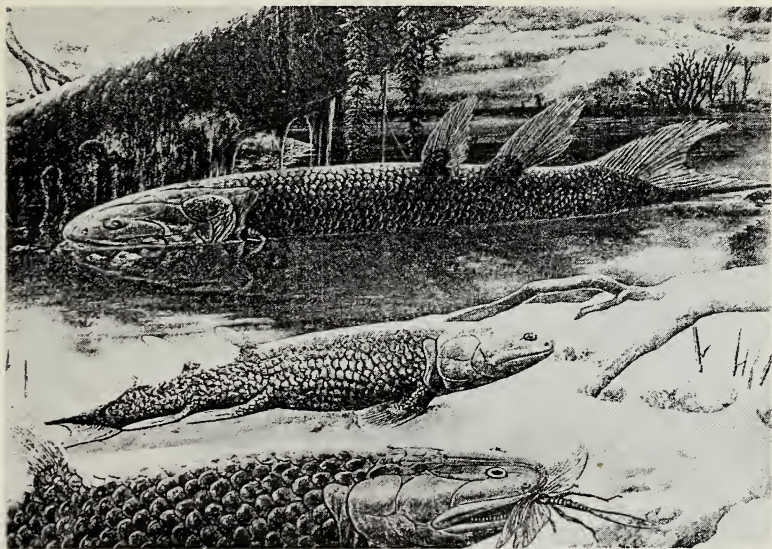


Figure. An artist's impression of the fossil fish, *Eusthenopteron*, 370 million years old, from rocks in Canada, a relative of the Foulden lobe-finned or crossopterygian fish, *Strepsodus ancylonamensis* (cf. Figure 4 of paper in this Part by Rolfe).

This indicates a very acute vibrational sense – an unexpected finding since most crossopterygian fish have a well-developed sense of smell but only a single lateral line. Whether this indicates something peculiar about the habitat preference of the rhizodontids is uncertain at present.

The discovery of the first complete remains of rhizodont fish at Foulden Burn gains us a clear impression of the appearance of these fish for the first time, and allows us to begin to understand their biology and their relationship to other contemporary types. It seems clear that these fish were lurking predators with highly specialised methods of dealing with their prey. Although they show some of the features which later developed into land-living amphibians – notable the pectoral fin, which has an internal bony skeleton reminiscent of the front leg of an amphibian – it is also clear, now that we know more about them, that they are far too specialised to be directly related to the ancestry of the first four-legged animals.

REFERENCE

Andrews, M. (1985) Rhizodont crossopterygian fish from the Dinantian of Foulden, Berwickshire, Scotland. *Transactions of the Royal Society of Edinburgh (Earth Sciences)*, 76, 67-96.

APPENDIX

Members may be interested to know that the *Transactions of the Royal Society of Edinburgh (Earth Sciences)*, 76, Part 1 (1985) is almost entirely devoted to the 1980s excavations at Foulden. Page references to the various papers are given below.

Wood, S.P., and Rolfe, W.D.I. Introduction to the palaeontology of the Dinantian of Foulden, Berwickshire, Scotland, p.1

Anderton, R. Sedimentology of the Dinantian of Foulden, Berwickshire, Scotland, p.7

Scott, A.C. and Meyer-Berthaud, B. Plants from the Dinantian of Foulden, Berwickshire, Scotland, p.13

Clayton, G. Plant miospores from the Dinantian of Foulden, Berwickshire, Scotland, p.21

Waterston, Charles D. Chelicerata from the Dinantian of Foulden, Berwickshire, Scotland, p.25

Briggs, D.E.G. and Clarkson, E.N.K. Malacostracan Crustacea from the Dinantian of Foulden, Berwickshire, Scotland, p.35

Almond, J.E. A vermiform problematicum from the Dinantian of Foulden, Berwickshire, Scotland, p.41

Pollard, J.E. Coprolites and ostracods from the Dinantian of Foulden, Berwickshire, Scotland, p.49

Forey, P.L. and Young, V.T. Acanthodian and coelacanth fish from the Dinantian of Foulden, Berwickshire, Scotland, p.53

Gardiner, B.G. Actinopterygian fish from the Dinantian of Foulden, Berwickshire, Scotland, p.61

Andrews, S.M. Rhizodont crossopterygian fish from the Dinantian of Foulden, Berwickshire, Scotland, with a re-evaluation of this group, p.67

Clarkson, E.N.K. Palaeoecology of the Dinantian of Foulden, Berwickshire, Scotland, p.97

AN EXOTIC CAT FOUND DEAD IN BERWICKSHIRE

C.O. Badenoch

Nature Conservancy Council
38 Gala Park, Galashiels TD1 1EU.

On 2 August 1990 the carcase of a large dappled cat was found by Mr M. Chisholm, of Greenlaw, at the raised mound known as the 'Butt' or the 'Target', on the southern edge of Greenlaw Moor, almost on Heriot's Dyke (NT 7148). The carcase was stretched out and unmarked by shot.

Mr Chisholm recovered the carcase and showed it to several people for identification. Eventually he brought it to Mrs Anne Mills, a taxidermist, at Swinton. Mrs Mills realised the possibly serious implications of the death of an exotic carnivore in the middle of agricultural Berwickshire. She also realised that a photograph of the carcase (Plate 1) would be essential for its proper identification – as it was starting to decompose.

The Nature Conservancy Council Borders Office was informed of the occurrence by Mrs Mills and by the Editing Secretary of the Club (who happens to have a cottage almost next door to Mrs Mills) because of the possibility of the illegal poisoning of an animal or of an illegal – and possibly rabid – introduction from abroad. The NCC alerted the Wildlife Liaison Officer of the Lothians and Borders Police.

The carcase was sent to Dr Andrew Kitchener of the Department of Natural History at the Royal Museum of Scotland in Edinburgh who confirmed the initial identification of the carcase (by Mrs Mills' small daughter, Becky!) as that of a southeast Asian species of leopard cat.

This species of leopard cat was first described, from India, by R. Kerr, about 1792, as *Felis bengalensis*. As exploration progressed, many similar cats were described as full species. However, most are now grouped as subspecies of *Prionailurus bengalensis*.

The present specimen has a rounded, fairly small, skull with the orbits of the eye sockets open posteriorly. It resembles a large domestic cat but is longer in the body and stands taller. Its tail, too, is relatively longer, being about a third of its total length. The tail is thickly furred, not 'bushy', with well-marked dark rings towards its tip. The many colour pattern and shade variations of the species delayed identification but the pale tawny ground colour, with brown-black markings, white underside and pale cheek stripes were determinant.

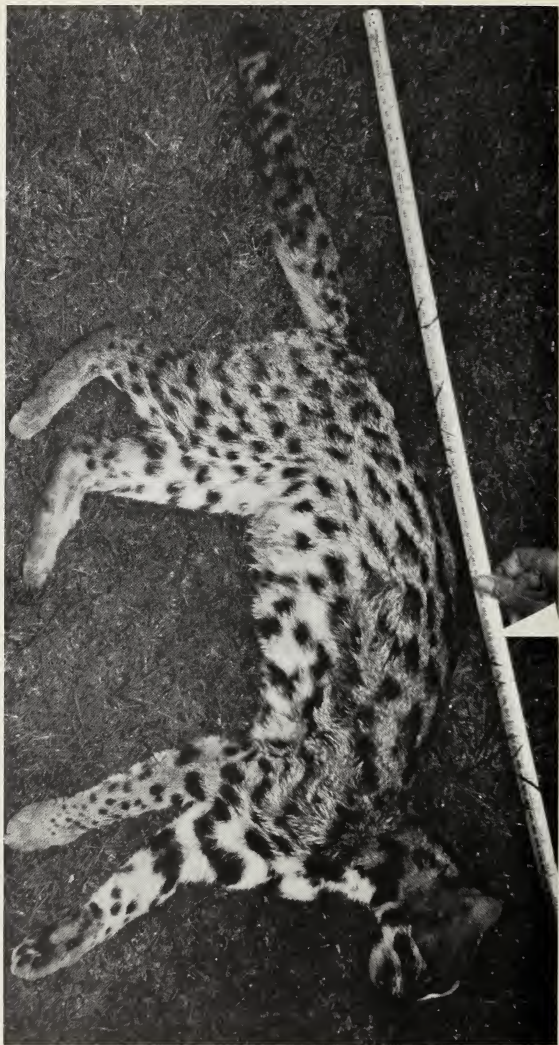


Plate 1. The exotic cat (*Prionailurus bengalensis*) found on Greenlaw Moor. The mark on the tape is at 500 mm. Photograph by Mrs Anne Mills.

The species inhabits forest and low jungle over a wide altitudinal range in Asia, from India and Malaysia, through eastern Tibet, Siberia and Eastern Manchuria to the coast of the Sea of Japan (to 15° N.) and to the Philippines. It is the commonest wild cat of southeast Asia but has undergone serious reduction in numbers in recent years and is now, quite properly, on the United Kingdom schedules restricting the sale of animals under the Endangered Species (Import and Export) Act of 1976, as amended by the Wildlife and Countryside Act (1981).

Little light has been shed upon the provenance of the Greenlaw Moor specimen. Many of these cats have been imported into Britain, in the pursuit of a rather dubious practice of hybridizing them with domestic cats to provide "a more spirited hybrid"! There were some reports of a large feline being seen in the Polwarth/Marchmont area woods during the week previous to the present finding; and of persons trying to catch a 'large animal' on the edge of Greenlaw Moor, some nights before the carcass was discovered. Most probably it was a 'pet' which escaped or was deliberately released. In full health the animal should have been able to sustain itself on birds and small mammals.

Because of the legal and disease implications, Museum staff were advised to have the internal organs analysed by the Department of Agriculture and Fisheries Scientific Services Division at East Craigs in Edinburgh. The postmortem examination found that the animal was thin and that its stomach was empty except for a small amount of mucus and some fur and grass. There was no evidence of organophorus, chloralose, carbamate or strychnine poisoning. Organochlorine residues in the liver were relatively low (0.1 mg/kg. DDE – the metabolite of DDT). There was, however, severe bruising of the head and the skull was fractured, indicating that the cause of death was trauma.

The skin had 'slipped' and so the specimen was unfit for taxidermy; the skeleton has, however, been retained in the collections of the Royal Museum of Scotland (Ref. No. NMSZ. 1991/033).

AN APPRECIATION

The death of Sir William Swan, who was President of the Berwickshire Naturalists' Club in 1987-88, has left a tremendous gap in the Community. Willie Swan, as he was universally known, was involved in so many activities and organisations, and knew so many people, that almost everyone in Berwickshire, and many more throughout the Borders and Scotland, have mourned his passing and felt the poorer for his absence.

First and foremost he was a countryman and deeply interested in agriculture and rural life. This was the theme of his Presidential Address in October 1988. This is not surprising as he had farmed at Blackhouse, Reston, since 1933. It was somehow appropriate that he should collapse while walking round his own acres last December. He was a member of many rural organisations and chairman of most. These have been listed elsewhere. Above all he was interested in the people in the countryside. Most he knew by name, with an encyclopaedic knowledge of their families and occupations. Always ready, with a warm smile and a handshake, a friendly inquiry or a sympathetic comment, he will be remembered with warmth and affection by many.

He was a sportsman. Cricket was his abiding passion and he was President of the Scottish Cricket Union for 2 years and was intensely proud of his son, Richard, who was captain of the Scottish Cricket team. He was also chairman of the Berwickshire Hunt for many years. In earlier seasons, when he rode to hounds, he went out of his way to encourage younger members of the field, and his knowledge of the farms and farmers over whose land the Hunt rode did much to prevent friction or problems. It was typical of the man that he should appear mounted at the meet in Duns, on New Year's Day, not having ridden during the previous year, because he felt, as Chairman, it was his duty to do so.

He was a soldier, who served throughout the war having joined his beloved 4th Battalion, The King's Own Scottish Borderers, as a young man. It may come as a surprise to those who knew him later in life that he was known as a pretty happy-go-lucky subaltern, who was often late on parade. He continued his association with the Territorial Army after the war, being president of the Lowlands T.A. & V.R.A. from 1983-86.

He was interested in young people, being County Commandant of the Army Cadet Force in the Borders from 1958-1973, as well as President of the Borders Scout Council from 1976 and the Borders Association of Youth Clubs a year later. It is therefore appropriate that the Swan Youth Trust has been set up as a memorial and tribute to him.

He was interested in the elderly. Swan Court, the Royal British Legion sheltered housing complex in Eyemouth is named after him, and it was a proud moment when H.M. The Queen opened it in 1984. He was a regular attender at their Christmas parties and always had something appropriate to say, as well as a quiet word with many of the tenants.

As Lord Lieutenant from 1969-1989, he worked tirelessly for the good of Berwickshire and for all the many organisations in it. He was out at one meeting or another almost every night, and it was not unknown for him to attend two or three meetings in a single day. His family had to work hard to ensure that he had one evening free each week. Everyone was delighted when he was appointed K.C.V.O. in 1988. He had previously received the C.B.E. in 1968 and the Territorial Decoration in 1955.

Some obituaries and appreciations have to skate round the truth, with obvious euphemisms or omissions. This is not the case with Willie Swan. He was a good man in every sense of the word. Wherever it is that such good men go, I am sure that he is already Chairman of several Committees, and is making his well known speeches at every gathering. I only wish that he was still here to make them for us.

S.J.F.

FIELD NOTES AND RECORDS – 1990

The recording of natural history observations in the Borders in the *History* of the Club is a long-established tradition which is to be encouraged as a record of the changes occurring in the flora and fauna over the years. A problem arises, however, nowadays, with the sheer volume of the information, in the context of rising publishing costs. Also, in the past, the *History* might be the only vehicle for such records. Today, there are individual specialist bodies dedicated to recording particular groups, such as plants, birds and Lepidoptera. A compromise is followed in this Part, continuing to publish essential details for some groups which otherwise would be inaccessible to local naturalists, and giving summaries, and directions to appropriate recorders, for groups that are dealt with in comprehensive detail by other bodies, such as the birds by the Scottish Ornithologists' Club. When abbreviation of records is necessary, the original full records are deposited in the Club's Library.

Permanent recording authorities are:

Lepidoptera – National Museums of Scotland; Biological Records Centre and Invertebrate Sites Register, Nature Conservancy Council.

Plants – Royal Botanic Garden, Edinburgh.

Birds – R.D. Murray (Scottish Ornithologists' Club), 4 Bellfield Crescent, Eddleston, Tweeddale EH45 8RQ.

BRISC, Biological Recording in Scotland Campaign, 5 Calton Hill, Edinburgh EH1 3BJ, is involved with local record centres in Scotland and organises the recording of particular groups, such as freshwater mussels, spiders, fleas, bees, slaters, etc., etc.

Compilers: D.G. Long, Royal Botanic Garden, Edinburgh EH3 5LR. C.O. Badenoch, Nature Conservancy Council, 38 Gala Park, Galashiels, TD1 1EU. A.G. Buckham, 9 Gorse Lane, Galashiels, TD1 2LY.

BOTANICAL

D.G. Long

Bryophytes

All records are during 1990, except where otherwise indicated. Nomenclature follows Corley & Hill, (1981).

Mosses

Aulacomnium androgynum. On old *Salix*, Longmuir Moss, NT 45, 20 April. New to vc81.

Barbula ferruginascens. Damp basic rocks, gully on NW slope of Clints Hill, NT 45, 21 June. New to vc81.

Bryum dunense. Dry bank on cliff top, Fast Castle, NT 87, 18 April. New to vc81.

B. inclinatum. On rocks by burn, Lumsdaine Dean north of Mains Burn, NT 86, 18 April. New to vc81.

Cinclidium stygium. Blackrigg Moss, Groundistone Heights, Hawick NT 50 20, 3 June, R.W.M. Corner. A rare species in vc80.

Eurhynchium speciosum. On wet rocks by waterfall, mouth of Dowlaw Dean, NT 87, 18 April. Confirmation of only Berwickshire record by J.B. Duncan in 1930.

Fontinalis antipyretica var. *gigantea*. Submerged at edge of Whiteadder below Cawderstones, NT 95, 1 April. New to vc81.

Homalothecium nitens. In base-rich flush, Wheel Burn, upper Blythe Water, NT 55, 4 May. A rare and threatened rich fen species thought to be extinct in Berwickshire.

Hypnum imponens. Peaty hollows in heather moor, Greenlaw Moor, NT 74, 21 April. A rare and declining species.

Isothecium myosuroides var. *brachythecioides*. Gully on cliffs, Heathery Carr, NT 86, 7 May. New to vc81.

Leptobryum pyriforme. Peaty flush by burn, Heriot's Dyke near Fangrist Burn, NT 74, 22 April. New to vc81.

Pohlia lutescens. On soil on roots of fallen tree, Sturdon Burn near Chapel on Leader, NT 54, 16 April. New to vc81.

Pseudobryum cinclidioides. Boggy ground amongst *Salix*, Longmuir Moss, NT 45, 20 April. New to vc81.

Rhynchostegium megapolitanum. Open soil bank, Partanhall near Burnmouth, NT 96, 24 February. New to vc81; a very rare species in Scotland.

Sphagnum quinquefarium. Steep bank of gully on NW slope of Clints Hill, NT 45, 21 June. New to vc81.

S. teres. In *Sphagnum* lawn by Wheel Burn, upper Blythe Water, NT 55, 4 May. New to vc81.

S. warnstorffii. In base-rich flush by Wheel Burn, upper Blythe Water, NT 55, 4 May. New to vc81.

Liverworts

Barbilophozia barbata. On damp fallen-down wall, Longmuir Moss, NT 45, 20 April. New to vc81.

Calypogeia neesiana. Peaty ditch, Long Bog, Edgarhope Moor, NT 55, 4 May. Second record for vc81.

Jungermannia exsertifolia subsp. *cordifolia*. On stones by burn, Blythe Water below Wheel Burn, NT 55, 4 May. New to vc81.

J. obovata. Damp basic rocks by burn in gully on NW slope of Clints Hill, NT 45, 21 June. New to vc81.

Leiocolea bantriensis. Base rich flush, Dowlaw Burn above Lumsdaine Dean, NT 86, 18 April. Confirmation of only Berwickshire record, by J.B. Duncan in 1927.

Metzgeria temperata. On *Betula* trunk on wooded bank of Leader Water below Chapel on Leader, NT 54, 16 April. New to vc81. An oceanic species very rare in eastern Britain.

Vascular Plants

Nomenclature follows Clapham, Tutin & Moore (1987). All records in 1990. Conventions: * not considered native; () casual only, or only present formerly.

Agrostis gigantea BLACK BENT. Arable land near Dunslaw Farm, NT 7855, 11 August, M.E. Braithwaite, determined by R.W.M. Corner. Second record for vc81 of a grass which is a frequent weed in south-east England.

Carex pallescens PALE SEDGE. Wet meadow, Leescleugh Burn, NT 7452, and flushed grassland, Wellcleugh Burn, NT 7352, 16 June, M.E. Braithwaite. First records for vc81 since 1880 of this sedge which is widespread in western Scotland but very scarce up the east coast.

*(*Chenopodium quinoa* QUINOA. Sown in wet woodland by the Blackadder Water at Nisbet Hill, NT 7950, 24 September, M.E. Braithwaite. A South American grain now sold as a component in a seed mixture for pheasant feed; it may well naturalise in the future).

**Cotoneaster horizontalis* WALL COTONEASTER. Natural rock outcrop, Cockburn Mill, NT 7758, 2 June, M.E. Braithwaite. First record for vc81 of an established colony in a natural habitat of this widely-cultivated garden shrub.

(*Diphasiastrum alpinum* ALPINE CLUBMOSS. Stony slope, A68 road, Soutra, NT 4756, 16 April, D.G. Long. Only extant locality of a clubmoss now perhaps reduced to casual status in vc81 but more common over 2000ft. in the Highlands.)

Genista anglica PETTY WHIN. Heather moor, Hogs Law, NT 5554, 7 May, M. Osborne. One plant in flower in an area of *Calluna* last burnt perhaps 5 to 8 years ago. The decline of this plant in the Borders is probably due to muirburn.

Hieracium propinquum HAWKWEED. Riverside rocks, Preston Bridge, Whiteadder Water; NT 7856, 11 August, M.E. Braithwaite, determined by D.J. McCosh; riverside rocks, Almaheart, Whiteadder Water, NT 7857, 24 September, M.E. Braithwaite, determined by J. Bevan. First and second records for vc81 of this leafy hawkweed which has a mainly English distribution in Britain.

Listera cordata LESSER TWAYBLADE. In *Sphagnum* under *Calluna*, Clints Hill, NT 4354, 21 June, D.G. Long; In *Sphagnum*, Longmuir Moss, NT 4750, 18 June, D. Adamson. Two further records of this scarce orchid.

Oenanthe crocata HEMLOCK WATER-DROPWORT. N bank of Tweed at Coldstream Bridge NT 84, July, C.O. Badenoch.

**Ornithogalum umbellatum* STAR-OF-BETHLEHEM. Roadside, Lennel NT 84, in abundance, July. C.O. Badenoch.

Parnassia palustris GRASS OF PARNASSUS. Sea braes, Yellow Craig, NT 9266, July, F.G. Hardy. Monitors a colony last recorded 1965.

Pinguicula vulgaris COMMON BUTTERWORT. Sea braes, Yellow Craig, NT 9266, July, F.G. Hardy. Monitors a colony last recorded in 1963.

*(*Rosa rubrifolia*. Natural rock outcrop, Cockburn Mill, NT 7758, 2 June, M.E. Braithwaite. A single plant only, but in this habitat it may well found a naturalised colony in time. A familiar garden rose).

**Rubus spectabilis*. Naturalised in woodland, Glenkinnon Burn, Peel NT 4234, 5 May, R.W.M. Corner, det. A. Newton. New to vc79.

Stellaria pallida LESSER CHICKWEED. Peniel Heugh, NT 6525, 19 May, R.W.M. Corner. Second record for vc80.

Thalictrum minus LESSER MEADOW-RUE. Sea braes, Lumsdaine shore, NT 8770, July, F.G. Hardy. A further coastal colony.

**Veronica hederifolia* ssp. *hederifolia* IVY-LEAVED SPEEDWELL. Waste ground, Duns, NT 7953, 6 May, M.E. Braithwaite. First record for vc81 of the less common subspecies of this plant, which is perhaps an introduction in Berwickshire. Ssp. *lucorum* is widespread.

**V. peregrina* AMERICAN SPEEDWELL. Walled vegetable garden, Newton Don, NT 7037, 6 May, M.E. Braithwaite. The last previous record for vc81 was in 1893 from the same locality.

A weed of sheltered gardens more frequent near Glasgow and in Northern Ireland.

Viola canina HEATH VIOLET. Cliff-top grassland, Lamber-ton, NT 9659, F.G. Hardy; sea braes, Burnmouth, NT 9561, F.G. Hardy, determined by A.J. Richards. Second and third localised records for vc81. A scarce plant in Scotland where it is often coastal.

REFERENCES

- Clapham, A.F., Tutin, T.G., Moore, D.M. (1987) *Flora of the British Isles*. 3rd Ed. Cambridge University Press.
 Corley, M.F.V., Hill, M.O. (1981) *Distribution of Bryophytes in the British Isles*. British Bryological Society.

Aquatic and Riverside Plants of the Tweed

C.O. Badenoch

A survey of the aquatic and riverside plants of the River Tweed between Paxton and Tweedhill (NT 932515 to 938522) was commissioned by the NCC, Galashiels, during July and August 1990. Of the total list of 188 species of vascular plants, only the more interesting recorded during the survey are listed below. Of particular interest is the range of *Potamogeton* species noted in view of the widespread use of aquatic herbicides on the river.

Alisma plantago-aquatica WATER-PLANTAIN
Butomus umbellatus FLOWERING-RUSH
Carex acuta SLENDER TUFTED-SEDGE
Elodea canadensis CANADIAN WATERWEED
Lysimachia vulgaris YELLOW LOOSESTRIFE
Myriophyllum spicatum SPIKED WATER-MILFOIL
Oenanthe crocata HEMLOCK WATER-DROPWORT
Origanum vulgare MARJORAM
Polygonum bistorta COMMON BISTORT
Potamogeton crispus CURLED PONDWEED
P. lucens SHINING PONDWEED
P. natans BROAD-LEAVED PONDWEED
P. pectinatus FENNEL PONDWEED
P. perfoliatus PERFOLIATE PONDWEED
P. pusillus LESSER PONDWEED
P. × salicifolius
Zannichellia palustris HORNED PONDWEED

The Botanist in Berwickshire - Addenda and Corrigenda

M.E. Braithwaite and D.G. Long

Addenda

The following hybrids are quite widely naturalised in Berwickshire and, although they were included in the checklist, their binomial names were not given; these, together with suggested English names, may be useful:-

Saxifraga spathularis × *umbrosa* LONDON PRIDE = *S.* × *urbium*.

Mimulus guttatus × *luteus* BLOTCHED MONKEYFLOWER = *M.* × *robertsii*.

M. cupreus × *guttatus* COPPER MONKEYFLOWER = *M.* × *burnetii*.

The following additional species are recorded:-

Corydalis lutea YELLOW CORYDALIS. Poorly naturalised on old mortared walls. Duns, Abbey St. Bathans, Paxton, Coldingham. First record 1947.

*(*Cuscuta epithymum* DODDER. Former rare casual introduced with clover, last recorded Hordweel NT 7859, 1889).

Corrigenda

p. 16: *Asplenium adiantum-nigrum* BLACK SPLEENWORT. Delete: Such material as has been studied has been ssp. *quadrivalens*. This remark relates to *A. trichomanes*.

p. 21: *Cardamine pratensis* CUCKOO FLOWER. The remark that the double-flowered form may be induced by a gall was prompted by the observation that it is commonly only the terminal flower of a raceme that is double. Dr. K. Bland advises that this form is quite widespread in Scotland and is believed to have a genetic origin.

p. 31: *Rosa canina* (group) DOG ROSE. A record for Newton Don appears against this heading; it relates instead to *R. rugosa*.

p. 56. ((*Potamogeton praelongus* LONG-STALKED PONDWEED. The former records for vc 81 are considered unreliable by Dr C.D. Preston. Some, at least, are based on specimens later redetermined by J.E. Dandy as *P.* × *salicifolius* and *P.* × *olivaceus*)).

p. 57 *Potamogeton filiformis* SLENDER-LEAVED PONDWEED. Coldingham Loch NT 8968, July 1978, R.C.L. Howitt (Specimen in Cambridge herbarium confirmed by Dr C.D. Preston). The most recent evidence of this nationally-scarce species in vc 81.

p. 68: for *Ranculus* read *Ranunculus*.

p. 109: Hareheugh Crags; for 76 55 read 68 40.

Copies of *The Botanist in Berwickshire* are available from M. E. Braithwaite, Clarilaw, Hawick, Roxburghshire TD9 8PT, for £5.30; cheques should be made payable to Berwickshire Naturalists' Club.

ENTOMOLOGICAL

Records of Tortricoid Moths from the Eastern Borders – 1973-1990

A.G. Buckham

In earlier contributions to the *History of the Berwickshire Naturalists' Club*, I listed macrolepidoptera that I had found in Border Counties (41, 113-115, 165-167; 42, 24-26; 42, 49-51). I now submit a list of the Cochylidae and Tortricidae found in these counties.

The larvae of these families occur in rolled leaves, plant stems and roots, flower-heads, seed-pods, etc.; the larvae of one species bores into apples. Some imagines are easily recognised on sight but many require detailed examination of their genitalia before a specific identification can be made. For many of these examinations I am indebted to the late Mr E.C. Pelham-Clinton of the National Museums of Scotland, who gave freely of his time and expertise; also to Dr K.P. Bland. The list contains one species new to Scotland, determined by Dr Bland. My thanks go also to Mr Andrew Panter NCC Warden (Borders), for maintaining the power supply for light traps in the field and to Mr C.O. Badenoch for assistance with presentation.

The new Scottish record is:

Code 1112 *Bactra robustana* Christ. Blackpool Moss: NT 52. VC 80. 18.7.90.

Editing Secretary's Note. This article covers Vice Counties 78, 79, 80, 81 – respectively, Peebles, Selkirk, Roxburgh, Berwick. The Superfamily Tortricoidea are small moths, mostly less than 25 mm wing span, with broad front wings which are 'squared off' at the outer edge and held, at rest, roof-like over their bodies; they include two families, the Tortricidae and the Cochylidae, only distinguished by small differences in wing venation. They used to be included in the "microlepidoptera", a convenience term related only to size, but which is not taxonomic. The best-known species are the Green Oak Tortrix (*Tortrix viridana*) and the Codling Moth (*Cydia pomonella*), pests, respectively, of oak and apple trees.

Mr Buckham's list records some 250 observations of more than 70 species, with English names, precise dates, localities, 10 km. squares, Vice Counties, and numbers taken. The full list will be deposited in the Club's Library but, so that the essential information could be quickly recorded, some information has been omitted. Very few of the species have English names and, as in any case these are of no taxonomic importance, they have been omitted. The earliest record is July 1973, the latest, October, 1990; the precise dates of the records have, likewise been omitted. Similarly omitted are the precise sites, and the occasional comments on numbers captured. Full grid references and specimens are held by Mr Buckham.

W.H.R.L.

Mr Buckham's List

Code	Species	10 km square (NT)	Vice-County
937	<i>Agapeta hamana</i> Linn.	23,51,53	79,80
938	<i>A. zoegana</i> Linn.	86	81
945	<i>Aethes cnicana</i> Westw.	43	79
946	<i>A. rubigana</i> Treit.	24,42,43,51,64	78,79,80,81
954	<i>Eupoecilia angustana</i> Hb.	14,42,43,52,54,64	78,79,80,81
969	<i>Pandemis corylana</i> Fabr.	51,53	80
972	<i>P. heparana</i> D.& S.	51,53	80
974	<i>Argyrotaenia ljunghiana</i> Thunb.	43,61	79,80
986	<i>Syndemis musculana</i> Hb.	11,41,43,51,52,53	78,79,80
988	<i>Aphelia viburnana</i> D.& S.	23,31,51	79,80
989	<i>A. paleana</i> Hb.	51,53	80
991	<i>Clepsis senecionana</i> Hb.	43,52	79,80
994	<i>C. consimiliana</i> Hb.	53	80
1000	<i>Ptyloloma lecheana</i> Linn.	51	80
1001	<i>Lozotaenia forsterana</i> Fabr.	51	80
1009	<i>Philedonides lunana</i> Thunb.	51	80
1010	<i>Ditula angustioraria</i> Haw.	53	80
1011	<i>Pseudargyrotoza conwagana</i> Fabr.	51,53	80
1013	<i>Olindia schumacherana</i> Fabr.	51	80
1021	<i>Cnephasia asseclana</i> D.& S.	43,51,52	79,80
1025	<i>Tortricodes alternella</i> D.& S.	51,84	80,81
1026	<i>Exapate congelatella</i> Cl.	44,51	79,80
1029	<i>Eana osseana</i> Scop.	51,52,53	80
1033	<i>Tortrix viridana</i> Linn.	51,53	80
1035	<i>Croesia bergmanniana</i> Hb.	48 (NY)	80
1036	<i>C. forsskalleana</i> Linn.	51,53	80
1037	<i>Acleris comariana</i> Lien & Zell	51,53	80

Code	Species	10 km square (NT)	Vice-County
1038	<i>A. laterana</i> Fabr. (= <i>latifasciana</i> Haw.)	51,53	80
1041	<i>A. sparsana</i> D. & S.	51	80
1042	<i>A. rhombana</i> D. & S.	51,53	80
1043	<i>A. aspersana</i> HB.	24,43,51,53	78,79,80
1045	<i>A. notana</i> Don. (= <i>tripunctana</i> Hb.)	43,51	79,80
1048	<i>A. variegana</i> D. & S.	51,53	80
1053	<i>A. hastiana</i> Linn.	59 (NY)	80
1061	<i>A. literana</i> Linn.	51	80
1073	<i>Olethreutes schulziana</i> Fabr.	31,41,43,45,51,54	79,80,83
1074	<i>O. palustrana</i> Lien & Zell.	43,51	79,80
1075	<i>O. olivana</i> Treit.	64	81
1076	<i>O. lacunana</i> D. & S.	23,43,45,51,53,64	79,80,81,83
1079	<i>O. bifasciana</i> Haw.	53	80
1082	<i>Hedya pruniana</i>	51	80
1083	<i>H. diminiolba</i> Retz. (= <i>nubiferana</i> Haw.)	51,53	80
1093	<i>Apotomis betuletana</i>	31	79
1111	<i>Bactra lancealana</i> Hb.	45,51,52,53	80,83
1112	<i>B. robustana</i> Christ.	52	80
1117	<i>Ancylis unguicella</i> Christ.	43,53	79,80
1119	<i>A. subarcuana</i> Dougl. (= <i>geminana</i> form <i>subarcuana</i> Don.)	43,52	79,80
1126	<i>A. badiana</i> D. & S.	24,43,51,52,53	78,79,80
1128	<i>A. myrtillana</i> Treit.	22	79
1130	<i>Epinotia pygmaeana</i>	51	80
1132	<i>E. subocellana</i> Don.	43,51,53	79,80
1134	<i>E. ramella</i> Linn.	51	80
1142	<i>E. tedella</i> Cl.	42,51	80
1154	<i>E. caprana</i> Fabr.	53	80
1159	<i>Rhopopota naevana</i> Hb. (= <i>unipunctana</i> Haw.)	53	80
1163	<i>Zeiraphera ratzeburgiana</i> Ratz.	53	80
1174	<i>Epiblema cynosbatella</i> Linn.	51,53	80
1176	<i>E. trimaculana</i> Haw.	51	80
1182	<i>E. turbidana</i> Treit.	43,53	79,80
1184	<i>E. scutulana</i> (Form <i>cirsiana</i> Zell.)	51	80
1186	<i>E. farfarae</i> Fletch.	43,51,96	79,80,81
1197	<i>Eucosma campoliliana</i> D. and S.	51	80
1200	<i>E. hohewartiana</i> D. & S.	53	80
1201	<i>E. cana</i> Haw.	42,51,53	80

Code	Species	10 km square (NT)	Vice-County
1219	<i>Lathronympha strigana</i> Fabr.	51	80
1228	<i>Pammene ignorata</i> Dan.& Kuzn.51 (= <i>argyrana</i> Hb.)		80
1234	<i>P. regiana</i> Zell.	51	80
1251	<i>Cydia jungiella</i>	51,52	80
1255	<i>C. succedana</i> D. & S.	43,51,59	79,80
1272	<i>C. aurana</i> Fabr.	72	80
1285	<i>Dichrorampha plumbana</i> Scop.	53	80

Nomenclature and taxonomic order follow: Bradley, J.D., Fletcher, D.S. (1979) A Recorder's Book or Label List of British Butterflies and Moths. London: Curwen Books. Agassiz, ? (1987) Addenda and Corrigenda to the preceding. Harley Books. Kloet, C.S., Hinks, W.D. (1972) A Checklist of British Insects; Lepidoptera, 2nd Ed. Handbooks for the Identification of British Insects, 11:2; as added to and amended in the *Entomologists' Gazette* (1974).

ORNITHOLOGICAL

Berwickshire Bird Observations - 1990

R. McBeath and D.G. Long

		Number	Date
<i>Podiceps ruficollis</i> (Little Grebe)	Hule Moss	1	22.04
<i>Anas crecca</i> (Teal)	Hule Moss	426	12.01
		740	01.12
<i>Spatula clypeata</i> (Shoveler)	Hirsel	1M	03.01
<i>Bucephalus clangula</i> (Goldeneye)	Hule Moss	20	01.12
<i>Somateria mollissima</i> (Eider)	St Abbs	128	05.01
	Lamberton	34	21.01
<i>Mergus merganser</i> (Goosander)	Hirsel	8	03.01
	Hule Moss	3	15.04
		8	24.11
<i>Anser anser</i> (Grey Lag Goose)	Dowlaw Dam	618	18.03
<i>Buteo buteo</i> (Buzzard)	Hule Moss	3	15.04
<i>Circus cyaneus</i> (Hen Harrier)	Hule Moss	1	03.01
<i>Lyrurus tetrix</i> (Black Grouse)	Greenlaw Moor	1M	29.04
	Kettlewell Moor	1F	20.05
<i>Gallinula chloropus</i> (Moorhen)	Mire Loch	11	05.01
<i>Fulica atra</i> (Coot)	Hirsel	44	03.01
	Mire Loch	47	05.01
<i>Haematopus ostralegus</i> (Oystercatcher)	Lamberton	82	19.08
<i>Charadrius hiaticula</i> (Ringed Plover)	Burnmouth	2	28.10
<i>Arenaria interpres</i> (Turnstone)	Burnmouth	40	25.02

		Number	Date
<i>Larus marinus</i>	Burnmouth	57	19.08
(Great Black-backed Gull)			
<i>Tringa totanus</i> (Redshank)	Burnmouth	68	02.12
<i>Calidris maritima</i> (Purple Sandpiper)	Burnmouth	5	24.02
<i>Delichon urbica</i> (House Martin)	Burnmouth	100+	19.08
<i>Corvus corone</i> (Carrion Crow)	Hule Moss	27	03.01
<i>Pica pica</i> (Magpie)	Houndwood	1	28.10
<i>Garrulus glandarius</i> (Jay)	Press Castle	2	25.02
<i>Oenanthe oenanthe</i> (Wheatear)	Fast Castle	2	18.03
<i>Sylvia atricapilla</i> (Blackcap)	Burnmouth	1F	28.10
<i>Phylloscopus collybita</i> (Chiffchaff)	Paxton	1M	01.04
	Allanton	1M	01.04
<i>Plectrophenax nivalis</i> (Snow Bunting)	Dowlaw	1	25.02

The St Abbs Head National Nature Reserve – Bird Log 1990

K. Rideout and P. Norman

This presents about 700 observations of the occurrence of around 160 species of birds. A selection from the records (months given as numbers) which seem particularly interesting are:

Pycnonotus sinensis – Chinese Bulbul – 13/05/90 An aviary escape?

Tachybaptus ruficollis – Little Grebe – 01-10; do not seem to have bred.

Puffinus griseus – Sooty Shearwater – Few seen, 09.

Cygnus cygnus – Whooper Swan – 03 and 11.

Branta canadensis – Canada Goose – Small groups, 05 and 08.

Branta leucopsis – Barnacle Goose – Small groups, 10.

Netta rufina – Red Crested Pochard – One male, 12.

Clangula hyemalis – Long Tailed Duck – Few, 10, 11.

Accipiter nisus – Sparrowhawk – Bred, first juveniles 07.

Falco peregrinus – Peregrine Falcon – Singles, 04, 05, once harrying kittiwakes.

Alectoris chukar/rufa – Red-legged Partridge – Few, 03-12.

Coturnix coturnix – Quail – one calling, 08.

Rallus aquaticus – Water Rail – Occasional, 04 to 12.

Lymnocyrtus minimus – Jack Snipe – Singles, 09 and 12.

Stercorarius pomarinus – Pomarine Skua – Occasional, 08-10.

Stercorarius parasiticus – Arctic Skua – Frequent, 07-10.

Stercorarius skua – Great Skua – Frequently seen, 07-10.

Larus minutus – Little Gull – 3 seen, 09.

- Sterna sandvicensis* – Sandwich Tern – Occasional, 04-09.
Sterna paradisea – Arctic Tern – 2 seen, 05.
Chlidonias nigra – Black Tern – One seen, 09.
Alle alle – Little Auk – Occasional: dead 02, 04; frequent sea off St Abbs, 12.
Columba oenas – One seen, 04.
Cuculus canorus – Cuckoo – Singles, 05-08, first, 16/05.
Apus apus – Swift – First, 08/05, last, 20/08.
Riparia riparia – Sand Martin – First, 18/04, last, 5/09.
Hirundo rustice – Swallow – First, 08/04, last, 27/10.
Delichon urbica – House Martin – First, 29/04, last 24/10.
Bombycilla garrulus – Waxwing – Occasional, 10, 11.
Phoenicurus ochrurus – Black Redstart – Singles, 03, 09, 10.
P. phoenicuros – Redstart – Occasional, 04-05 and 08-10.
Saxicola rubetra – Whinchat – Occasional, 05, 07, 08, 09.
Oenanthe oenanthe – Wheatear – First, 18/03, first juv. 09/06, last, 14/10.
Turdus torquatus – Ring Ousel – Occasional, 04, 05, 09-10.
Turdus pilaris – Fieldfare – Occasional, 01-05, plentiful, 10, 11.
T. iliacus – Redwing – Occasional 02, 04, plentiful end 09 and 10.
Locustella naevia – Grasshopper Warbler – One, only record, 2/05.
Acrocephalus schoenobaenus – Sedge Warbler – First, 29/04, last 15/09.
Sylvia, *Phylloscopus* spp. – Warblers, Blackcap – Many records, commonest, *S. atricapilla* (Blackcap), 03-10, *P. collybita* (Chiffchaff), 03-10, *P. trochilus* (Willow Warbler), 04-10.
Regulus regulus – Goldcrest – Occasional, 03-04, parties, 08-10.
R. ignicapillus – Firecrest – One record, 10.
Muscicapa striata – Spotted Flycatcher – 05-09, fledglings, 07, 08. Last 26-9.
Ficedula hypoleuca – Pied Flycatcher – Occasional, 05, 08, 09.
Aegithalos caudatus – Longtailed Tit – Parties, 10.
Lanius excubitor – Great Grey Shrike – One seen, 23-24/10.
Corvus corax – Raven – Occasional, 01, 04, 09.
Loxia curvirostra – Crossbill – Occasional, 08-10; first records since 1978.

Jack Snipe (*Lymnocyrtus minimus*)

C.O. Badenoch

Records of this species are relatively few in the Borders, generally fewer than half-a-dozen each year. The 11th Borders Bird Report (Murray and McConnell, 1989) gives four sightings. The 1990 Bird Log from St Abbs Head National Nature Reserve

(See above) gives single sightings in September and December. The winter of 1990/91 has produced three additional separate records, as follow:

1990/11. One flushed; Overwells, Oxnam by Jedburgh (P. Knight).

1991/01. One flushed, bank of Tweed at West Newbiggin, Norham (C.O. Badenoch).

1991/02. One found dead, playing fields at Netherdale, Gala-shiels; badly emaciated (A.C. Taylor, A.G. Buckham and A.T. Bramhall).

The Jack Snipe is a passage or winter migrant, much smaller than the Common Snipe (*Gallinago gallinago*), and with a shorter bill. When flushed it usually rises much more directly, but more slowly, without the characteristic zig-zag of the Common Snipe. It often drops again quite quickly – quite differently from the “towering” flight of the other species.

REFERENCE

Murray, R.D., and McConnell, F. (1990) Borders Bird Report No. 11, 1989. Scottish Ornithologists' Club.

FIELD SECRETARIES' REPORT – SEASON 1990

16 May, Wednesday. The first meeting of the season was held at LINLITHGOW, West Lothian. The weather was wet, cold and windy but Linlithgow Palace, whose history and architecture as described by Mr Stewart Cruden, the former Chief Inspector of Ancient and Historic Monuments of Scotland, so entertained the members that the weather was more or less ignored.

In the afternoon members enjoyed the comfort of St Michael's Parish Church. The Minister, the Rev. Ian Paterson, M.A., B.D., gave the history of this lovely old church.

Torphichen Preceptory was the final visit for the day where again Mr Stewart Cruden gave an interesting account of the buildings.

Some members found time to visit Cairnpapple Hill fort nearby. Tea was most amply provided by the ladies of the Church Guild in Cross House, Linlithgow. About 120 members attended.

25 May, Friday. (Extra meeting). Members sailed from North Berwick to the BASS ROCK. The weather, fortunately, was perfect and members enjoyed a day of observing bird-life and the Bass's unusual plants. About 60 members attended.

7 June, Thursday. (Extra meeting). A nature meeting was held at DUNS CASTLE Nature Reserve. This was conducted by Chris Badenoch who, as usual, with his expertise and friendliness, had an appreciative attendance; in good weather.

21 June, Thursday. The second meeting was held at CHIPCHASE CASTLE, Northumberland. This lovely structure – domestic rather than fortified – was much appreciated, especially as Mrs Morrison-Bell, the owner, conducted the Members around the interior. A picnic luncheon was taken within the grounds.

The cavalcade then proceeded to the attractive village of SIMONBURN where, at the fine 13th century church, the Rector, the Rev. S.V. Prins, T.D., M.A., BSc, welcomed the party. Mr Lagerberg, a local historian, gave a talk about the history of the church and village. He also showed his beautiful garden.

The meeting was completed at BELLINGHAM, a small but interesting town where could be seen such items as the Pedlar's Gravestone and an ancient well. Tea was taken at the Cheviot Hotel. About 150 members attended in sunny weather.

18 July, Wednesday. The third meeting was held at YESTER PARISH CHURCH, GIFFORD, where Mr John H. Simpson, a

local historian, gave an account of the history of the church. A picnic luncheon was then taken in the grounds of Yester House where, fortunately, there was ample parking space for a very large turn-out of the Club – over 200. The sky was blue and the temperature very high indeed. Mr Gian Carlo Menotti, owner of the house, together with his family, welcomed the members, who enjoyed seeing the interior of this beautiful mansion. Lady Maryoth Hay who so greatly enhanced our enjoyment of the visit to Yester House then welcomed the Club to her beautiful garden at Forbes Lodge, Gifford. Tea was enjoyed at the Goblin Ha' Hotel.

16 August, Thursday. The fourth meeting was held at HERMITAGE CASTLE where Dr Michael Robson gave a most entertaining history of this stronghold. After a picnic luncheon in the vicinage of the Castle the Club visited LIDDEL CASTLE, a little-known but important castle in Norman times. Dr Robson again delighted the members with his account of this keep.

The estate-planned village of NEWCASTLETON was then explored with the assistance of Miss Ann Charters, a member of the Liddesdale Heritage Association.

Tea was taken in the Copshaw Kitchen. The weather was mixed and the attendance about 140 members.

12 September, Wednesday. The fifth meeting was held at MELLERSTAIN, the Borders home of the Earl and Countess of Haddington. Members were very impressed by the interior decoration by William and Robert Adam whose plasterwork, particularly the ceilings, is outstandingly famous.

Legerwood Church was the next venue, where the minister, the Rev. R.D. Higham, B.D., gave an account of this charming old church's history.

Tea was taken at the Castle Hotel, Greenlaw, which is itself an historic building. The church and tower (with its gaol) were open to the members. The weather was pleasant and about 180 members attended.

26 October, Friday. (Extra meeting). On the morning of the Annual General Meeting members met at NORHAM CASTLE where Dr G.A.C. Binnie outlined the history of this famous old castle. 35-40 members attended.

ENVOI

May we say, finally, that we have both enjoyed our 16 years as Joint Field Secretaries and also our 40 years of Club membership. Throughout the years we have found everyone appreciative and kindly; we sincerely wish the Club future fortune and many more happy meetings.

D. and L. Mackenzie Robertson.

The Berwickshire Naturalists' Club has been fortunate, throughout its history, in attracting certain dedicated members who have been prepared to give of their knowledge, enthusiasm and time to the Club. David and Lena Mackenzie Robertson have kept up that tradition of unstinting service.

As Joint Field Secretaries for the past sixteen years they have planned and organised all Field Meetings, thus making an enormous contribution to the life of the Club. Their active participation at Council Meetings has been invaluable and all Club members, but Past Presidents in particular, have reason to be grateful for their kindly help and support at Field Meetings.

David and Lena's aim has always been the well-being and good name of the Berwickshire Naturalists' Club. For this and for all their efforts on behalf of the Club, we, the members, heartily thank them.

M.C.H. McC.

LIBRARIAN'S REPORT – 1990

The library continues to be housed in Berwick Museum (postal address, Berwick upon Tweed, TD15 1DQ). Storage space in the Museum is being expanded and it is hoped that 1991 will see the library securely housed in its own quarters with better facilities for reference and study. Access is by Club Library ticket, available to members from the Librarian, and arrangements for viewing should be made direct with the Museum curator (Mr C.G.W. Green, telephone 0289 330933). Questions about the library should be directed to the Club Librarian.

The late Mr G.E. Davidson's collection of papers on various Border parishes, particularly of the parish of Abbey St Bathans, to a lesser degree, the parishes of Coldingham and Cockburnspath, was sorted and catalogued by Mr G.B. Millican and then added to the collection of Berwickshire parish notes started by Mr J.H. Craw. Also from the same source were the following books:

Rogers, C. (Ed.) (1879) *Chartulary of the Cistercian Priory of Coldstream*.

Brander, M. (1980), *The Making of the Highlands*.

Anderson, G.M. (1979), *From the Glens to the Lowlands*.

Other books received by the Library as gifts were:

Allan, R., Candlish, I., (Eds.) (1988) *The Scottish Borderland, the Place and the People*.

Allan, R., Candlish, I., (Eds.) (N.D.) *A Strategy for Countryside Interpretation in the Borders*.

Kelsall, H., Kelsall, K. (1986) *Scottish Lifestyle 300 Years Ago*.

Donated by Mr L.H. Cleat.

Laidlaw, Walter (1904), *Poetry and Prose*.

Donated by Mrs Payne.

Wallace, Joyce (1987), *Historic Houses of Edinburgh*.

Donated by Mrs Margaret Totty.

Kelsall, H., Kelsall K. (1990). *An Album of Scottish Families. 1694-1696*.

Donated by Mr and Mrs Stuart Maxwell.

Library funds were used to purchase:

Mitchell, Keith L. (1988), *Fast Castle*. Edinburgh Archaeological Field Society.

Southern Counties Register and Directory of 1866. Republished in facsimile by the Borders Regional Library.

Copies of the photographs used to illustrate F.C. Sillars "The Tweed" (1935) were donated by the author's sister, Mrs Milner-Moore, a rather unusual but still appreciated gift.

The Librarian restates his plea to be given first refusal of any demographic or historical material relating to the Club's area such as the various leaflets produced by churches and villages. Gifts of unwanted copies of the *History* are also welcomed.

LIBRARIAN'S FINANCIAL STATEMENT FOR THE YEAR ENDED 26 OCTOBER 1990

INCOME

	£
Opening balance	601.83
Sales of <i>History</i>	177.78
Interest	<u>46.81</u>
	<u>826.42</u>

EXPENDITURE

	£
Postage	17.43
Stationery	10.31
Books	23.95
Binding	464.00
Closing balance	<u>310.73</u>
	<u>826.42</u>

G.A.C. Binnie

FINANCIAL STATEMENT FOR YEAR ENDED 30th SEPTEMBER, 1990

INCOME		EXPENDITURE	
Balance in No. 1 Acc. at 30.9.89	£815.50	Third repayment of loan for 'Index'	£1,000.00
Balance in No. 2 Acc. at 30.9.89	2,087.61	Library Insurance	100.00
<i>Subscriptions</i>		Subscriptions paid	35.00
Annual, libraries		Subscriptions refunded	282.00
(including subs. overpaid)	3,756.00	Legal advice on copyright	28.75
Entrance fees and badges	129.00	Hire of Hall for A.G.M.	7.95
<i>Sundries</i>		Printing - Martins (inc. post.)	2,788.97
Tax Refund	346.27	Printing others	12.75
Visitors' fees (including £130 paid direct to Field Secretaries and retained as part of their expenses)	152.00	<i>Council Expenses</i>	
Donations	12.75	Corresponding Secretary	88.32
Bank Interest on No. 2 Acc.	207.17	Treasurer	104.31
		Editing Secretary	125.36
		Field Secretaries (including £130 visitors fees retained)	689.47
			<u>£5,262.88</u>
		Balance in No. 1 Acc.	588.64
		Balance in No. 2 Acc.	1,654.78
			<u>£7,506.30</u>
		Balance on Moneyspinner Plus	
		Share Account for National	
		History Publication Fund	£2,144.75

11th October 1990. I have examined the books of the Berwickshire Naturalists' Club and from the information and vouchers provided have found them to be correct and in order.

(Sgd) E.J. Kellie
Royal Bank of Scotland plc,
AYTON.

EDITORIAL NOTES

Until this year the Editing Secretary worked under some difficulty as the series of past issues of the *History* that was available to him for reference was incomplete, comprising only his own copies since his joining the Club, and some miscellaneous earlier years from the Edwin Davidson bequest to the Club and from a sale room purchase on behalf of the Club by Mr and Mrs Mackenzie Robertson. Deficiencies have now been repaired by the handsome gift to the Club of the series of the *History* which belonged to the late Mr T.D. Thomson, by Mr David J.D. Thomson. The Club, and particularly the Editing Secretary, is most grateful for this donation.

The holdings of the Copyright Libraries of the Club's *History* were investigated. The British Library and the National Library of Scotland both had complete, or practically complete series of the *History* from its inception but some of the other Copyright Libraries, such as the National Library of Wales and Trinity College Library Dublin, had only imperfect series. All the Copyright Libraries have now signified their wish to receive the *History* in the future, and any available copies from the past to improve their holdings where these are deficient.

The UK National Serials Data Centre at the British Library and the Standard Book Numbering Agency Ltd, respectively, were approached for the conferment of an International Standard Serial Number for the *History of the Berwickshire Naturalists' Club* and of an International Standard Book Number for occasional publications of the Club. These are, respectively, ISSN 0960-4170 for the *History* and 0 9516434 for occasional publications. These numbers are carried at the top right corner of the front cover of the *History* and on the reverse of the title page of occasional publications. Mr Michael Braithwaite's *The Botanist in Berwickshire*, published in 1990, is the first occasional publication of the Club to carry the ISBN. The conferment of these internationally-recognised numbers will extend recognition of the status of the Club's publications.

THE BERWICKSHIRE NATURALISTS' CLUB

(The 22d September, 1831)

APPLICATION FOR ELECTION AS A MEMBER

Full Name and Address of Candidate:—

(Miss, Mrs, Mr or Title)

.....

.....

(in block capitals).

We are personally acquainted with above named candidate, and in accordance with Rules 2 and 3 of this Club we believe that he/she is "interested in the investigation of the natural history and antiquities of Berwickshire and its vicinage."

(Signed) Proposer.

..... Seconder.

I agree to the
above nomination Candidate.

Dated 19.....

Rule 2. – The object of the Club is to investigate the natural history and antiquities of Berwickshire and its vicinage.

Rule 3. – All interested in these objects are eligible for Membership.

Rule 5. – New members are elected at any meeting of the Club by the unanimous vote of members present, the official forms having been duly completed, and the nominations having been approved by the office-bearers. New members are entitled to the privileges of membership upon payment of the entrance and membership fees (1922), concerning which they will be duly notified (1937). If elected in September such member is eligible to attend the Annual Meeting for the year, no fees being due before 1st January (1937). The names of new members who have not taken up membership within six months of election, and after having received three notices, will be removed from the list (1925).

Rules 6.-7. – The entrance fee is £2 and the annual subscription £10 for individual members and £17 for husband and wife membership both of which are due on election. Subsequent subscriptions are due after the Annual Meeting and entitle members to attend the meetings and to receive a copy of the Club's *History* for the ensuing year. No fees or first subscriptions should be sent until requested by the Treasurer.

Rule 8. – The number of Ordinary Members is limited to 400. The names of candidates are brought forward in priority of application, power being reserved to the President to nominate independently in special cases, irrespective of the number of members on the roll.

Note:— This form, without which no names can be brought forward for election, when completed, should be posted to the Treasurer, M.C. Trousdell Esq., Hillburn House, Ayton. TD14 5SG.



ADVICE TO CONTRIBUTORS

The *History* of the Berwickshire Naturalists' Club has now run continuously for 159 years. It has recorded a huge amount of information about every aspect of life in the Borders: archaeology, genealogy, history, sociology, topography, and all branches of natural history. It is an invaluable repository for such primary information.

Many people with special knowledge of Border affairs and happenings may, perhaps, be inhibited from contributing to the *History* by being unfamiliar with how to put an article together. The following notes are designed to assist, reassure and encourage such people; but also to be a general guide to all contributors. The requirements are simple; but the more closely the notes are followed, the speedier will be publication, the easier the lot of the Editing Secretary; and the greater the likelihood that the Club will be able to attract Editing Secretaries in the future!

Manuscripts are best typed, double-spaced, and two copies sent; but even handwritten documents, if clearly legible, can be considered. References in the text to other publications are most simply done by author name(s) and date and then listed in alphabetical/chronological order at the end of the manuscript, giving the title of the document and, for papers in journals, the volume and page number, for books, the place of publication and the publisher. In this style:

Baxter, E. V., Rintoul, L. J. (1953) The birds of Scotland, Edinburgh: Oliver and Boyd.

Boyd, H., Ogilvie, M. (1969) Changes in the British wintering population of the pinkfooted goose from 1950-1975. *Wildfowl*, 20, 33-46.

Taylor, G. (1937) List of fungi observed in the neighbourhood of Cockburnspath. *History of the Berwickshire Naturalists' Club*, 29, 303-313.

Titles of periodicals should be written in full, as above, not abbreviated.

Sometimes text references to other publications, documents, etc., in the text are more conveniently done by superscript numbers, e.g.:

"the house of Netherbyres"⁵

and then related to a numbered entry in a list of references/ notes at the end of the paper, as e.g.:

"5. Scottish Record Office TD 78/7."

When other publications have been consulted but are not specifically cited, it may still be useful to guide readers following up the subject, to give a "Bibliography", citing the publications in the same way as for references above.

Illustrations should be numbered consecutively and provided with short descriptive legends.

Contributions may be sent direct to the Editing Secretary, or handed to any Council Member.

Copyright. The copyright of papers published in the *History* will normally be understood to pass to the Berwickshire Naturalists' Club, as a permanently accessible institution, but authors may reserve copyright to themselves, if they so wish, by a written request to the Editing Secretary.

HISTORY
OF THE
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NATURALISTS' CLUB

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Price to non-members £5.00

The Centenary Volume, published 1933, provides an index to
the *History* from Volumes 1 to 27, (1831-1931).

Price £20.00

The Sesquicentenary Volume, published 1987, provides an
index to the *History* from Volumes 28 to 41 (1932-1980)

Price £15.00

For purchase apply to:
The Librarian, Berwickshire Naturalists' Club,
Borough Museum, The Barracks,
Berwick upon Tweed TD15 1BT, U.K.

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